THE LONG LIFE SERIES.

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SLEEP

AND

HOW TO OBTAIN IT.

NATURE OF SLEEP, EXERCISE, DIET, MODE OF LIVING, BEDDING AND BEDROOMS, DREAMS, SOMNAMBULISM, &c.

BY

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NEW EDITION.

1894

WARD, LOCK, BOWDEN AND CO.,

LONDON: WARWICK HOUSE, SALISBURY SQUARE, E.C.

NEW YORK: EAST 12TH STREET

MELBOURNE: 3 & 5, ST. JAMES'S STREET. SYDNEY: YORK STREET.

PREFACE.

THE importance of the subject treated of in the following pages is readily admitted by all, although the *value* of sleep is frequently far from appreciated at its real worth. It is like a good many more of the blessings that are bestowed upon us by the all-loving Father, we receive them little knowing how priceless they are, and without even a feeling of gratitude entering our heart. People who don't know what to do to "kill" time, and who spend a considerable part of their existence lolling about in an aimless kind of way, have not yet learned to be thankful for "Sleep, tired nature's sweet restorer"; but those whose duty it is to sit long, weary hours, in the stillness of the night-watches, by the bedside of the suffering, can tell you how thankful they are for a bed to lie down upon, and for the sleep which they know awaits them. Many persons, and perhaps brain-workers more than others, are apt to deprive themselves of a sufficient amount of sleep. This is a mistake. Nothing is ever gained by stealing from the hours that should be devoted to slumber. Work is much less of a burden when undertaken after a sound and refreshing night's rest than it is when we have stinted ourselves of sleep. During sleep the body becomes invigorated and the mind refreshed, and in order that we may benefit to the

full from the time so spent, we should be careful to go to bed with the intention of falling asleep. It is well, when it can be managed, to have the mind off the stretch some little time before retiring to rest. The heavier part, both of work and eating, should be over in the early part of the day. Heavy suppers are apt to be followed by nightmare, and should be indulged in as seldom as possible. The man who sits up into the small hours of the morning, working with his brain, perhaps spurring his flagging energies with tea, coffee, or other stimulant, will generally be fit for very little next morning, and is running a great risk of burning the candle at both ends. Although many persons sleep in the day-time, and work both with head and hand at night, it seems more natural that this should be reversed. It is better, too, for the eyesight that work should be done by daylight, and perhaps less would be heard of eye affections, and there would be fewer requiring to wear spectacles were there less work done by gas, lamp, and candle-light. Full and sufficient sleep should be taken whenever it can be had, and neither alarum-clocks nor persons to call one should be had recourse to unless in cases of emergency. Each man and woman must determine the amount of sleep necessary for himself and herself, but it is better, on the whole, to take too much than too little sleep. They act unwisely who suppose that by taking as little sleep as possible they are able to do more work in the world. They may, indeed, spend more hours with their eyes open, but the well-slept man may take in twice as much while his eyes are open, and perhaps accomplish in the end a great deal more. The whole subject is gone into most thoroughly in this manual, and many hints are given which will doubtless prove of use to the reader.

GEORGE BLACK.

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SLEEP, AND HOW TO OBTAIN IT.

INTRODUCTION.

"Good muse, rocke me aslepe
With some sweet harmony:
This wearie eye is not to kepe
Thy wary company.
And in a dream bewraie
What fate shall be my frende;
Whether my life shall still decaye,
Or when my sorrows ende."

N. Breton.

Have you ever reflected, my studious reader, as you nestled under those snow-white sheets and drew around you that charming coverlid whose dainty and cubical parts were stitched together by the fair fingers of some revered ancestor—have you ever, I say, felt the full importance of sleep, and what would happen were all sleep suddenly taken from us?

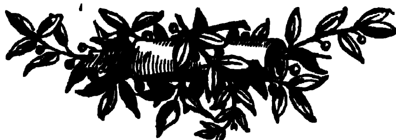
Sleep is the most extraordinary condition in which we can ever find ourselves; at its approach we surrender up the use of all the faculties God has given

us—seeing, hearing, feeling, smelling, tasting, perception, reason, memory, reflection, all leave us; no matter how important the business we are engaged in or how delightful the amusement, directly the mighty giant approaches we lay it all aside, and sink at once into oblivion.

Then, again, there is nothing so universal as sleep. Everybody needs it. The tiniest babe enjoys it in perfection. The oldest man has not learned to do without it. The strongest must submit to its sway. The cleverest has never found a substitute for it.

Nor is man the only object of its influence, for the lower animals sleep just as completely; and some, such as the dormouse, tortoise, serpent, &c., prolong their slumbers for months. Birds go to roost, insects cease to buzz, fishes sink into quietude; and lower again, in the vegetable world, plants close up regularly at nightfall, some of them folding their leaves over their flowers just as the birds fold their wings over their heads. Everything that has life needs

"Tired nature's sweet restorer, balmy sleep!"





SLEEP A NECESSITY.

"'Twas a night!
'Tis strange that I recall it at this time;
But I have found our thoughts take wildest flight
Even at the moment when they should array
Themselves in pensive order."

BYRON.

SLEEP is a necessity. It is part of the system of nature. God has ordained the day for work and the night for rest; just as in the vegetable kingdom He has ordained the spring and summer for the growth and development of plants and trees, so He has given autumn and winter for their ripening and repose. Sleep is evidently meant to remind us of our mortality. Our Saviour said, "Our friend Lazarus sleepeth; but I go, that I may awake him out of sleep. Then said His disciples, Lord, if he sleep, he shall do well. Howbeit, Jesus spake of his death." Our bodily system has been so ordered that the alternations of work and repose are absolutely essential to its wellbeing. This distinguishes man from a machine. A steam-engine has no power of recuperation and needs no rest; it is worked on, and on, and on without a moment's relaxation until some part of the machinery gives way or wears out; there is no change, no variety, no adapta-

bility, no passions to arise, no feelings nor sentiments to awaken; there is, in short, none of that beautiful sensitiveness to outward influences which makes man require periodic and complete repose. How monotonous and dreadful, as we are at present constituted, would be perpetual day!—if we were to have all dinners and no breakfasts and teas!—if it were to be always noon and never morning nor evening! Life would be simply unendurable.

The desire for rest is, therefore, a natural one. The animal economy demands a rhythmical period of complete repose—rest of mind, body, and soul—and that brain cannot be in a natural and healthy condition wherein exists an unquenchable craving for continued and ceaseless exertion. Sound, continuous, regular, and undisturbed sleep is absolutely necessary for each one of us; for not only is this period a rest and relaxation for all the nervous and muscular systems, but it affords the best opportunity for the assimilation of our food and for the absorption of nutrition into the blood. Even those actions which are most continuous, such as respiration and the pulsations of the heart, have distinct periods of suspension. Thus, after the contraction and dilatation of the auricles and ventricles of the heart, there is an interval during which the organ is at rest. This amounts to one quarter of the time requisite to make one pulsation and begin another. During six hours of the twenty-four the heart is, therefore, in a state of complete repose. If we divide the respiratory act into three equal parts, one will be occupied in inspiration, one in expiration, and the other

by a period of quiescence. During eight hours of the day, therefore, the muscles of respiration and the lungs are inactive. And so with the several glands: each has its turn for rest.*

We may, of course, work ourselves, by an injudicious course, into a state wherein all desire for sleep is destroyed. Thus persons have continued their mental labours by forced stimulants until the muscular system of the brain has lost its power of contraction and adaptation, and they have been unable to sleep at all. But their health suffered from the lack of repose, and a long illness was the result of their want of proper attention to natural laws.

In recovery from any acute malady repose is one of the best signs and restoratives. It allows the oppressed organs to regain their rhythmical motions and return to their usual healthy condition.

* Dr. Hammond.





THE NATURE OF SLEEP.

"In that sweet season, as in bed I lay,
And sought in sleep to pass the time away."

DRYDEN.

THE first question which presents itself to the mind of an intelligent inquirer after any subject is, *What is the nature of it, and what are its usual phenomena?* Upon this question we differ in the present day from the ancients. Some of them placed the source of sleep in the heart, others in the head; some considered that the blood flowed into the brain and produced a species of congestion there—a kind of coma or unconsciousness very nearly akin to apoplexy.

But modern opinion has reversed this process, and the latest and best supported views of the process of sleep, physiologically considered, are that it arises from a depletion or flowing away of the blood from the brain. This view is powerfully sustained by the observation of the brain of a beggar in Paris, whose skull was fractured and had to be covered with a silver plate; for it was observed that when the man fell asleep his brain sank, and only regained its natural size and form when he awoke. And the state of the brain varies according to the state of the other organs: thus when under the influence of mental activity or excitement, or of any of

the passions, the brain becomes dilated and filled with blood; whilst at sleep the brain loses its blood and contracts. So well is this known to physiologists, that, by pressing upon the carotid arteries and thus diminishing the flow of blood to the brain, they have produced sleep most rapidly.* Garotters also use sudden compression of the carotids to produce insensibility. Dr. Alexander Fleming, late Professor of Medicine, Queen's College, Cork, states that while preparing a lecture on the mode of operation of narcotic medicines, he conceived the idea of trying the effect of compressing the carotid arteries on the functions of the brain. The first experiment was performed on himself, by a friend, and it had the effect of causing immediate and deep sleep. The attempt was afterwards frequently made, both on himself and others, and always with success.

But any one, placing his hand upon his head, and feeling the hardness of the bone which forms it, may wonder how the brain could expand and contract. A glance at a dried human skull, however, will show that its inside is smooth, like the inside of an egg-shell, whilst the brain itself is corrugated and somewhat resembles the kernel of a walnut. By this beautiful arrangement the lobes of the brain, which are full of little blood-vessels, are able to expand laterally when charged with blood or to contract on losing it.

Sleep may be, of course, imperfect, as in the case of a person who dreams; for when he awakes he remembers his dream, thus showing that some part of the brain-action must have been carried on during the

* C. H. Moore.

period of sleep—that impression and memory must have been at work, and that he has really only been in a state of sub-consciousness all or at least during a part of the time. But perfect sleep is a condition of complete repose of every *voluntary* limb, organ, nerve, muscle, and gland; it is a repose of the power and machinery of the will initiated by the brain.

THE BODY INDEPENDENT OF THE MIND DURING SLEEP.

"There is a calm upon me—
Inexplicable stillness!—which till now
Did not belong to what I knew of life."

BYRON.

ALTHOUGH at first sight we should all say that to move the body required a distinct effort of volition, yet the body during sleep can readily move itself from side to side or change the position of any of its limbs without the mind receiving any impression of the matter, or at least of recollecting it. Thus a sleeper lies down on one side and wakes up on the other, his arms and legs, perhaps, having been in a dozen different positions in the meanwhile. The Dacoits, or professional thieves of India, take advantage of this, and can actually manage to steal a mattress upon which a person is sleeping. Their mode of procedure is as follows:—They tickle some portion of his body, which, feeling

the interruption, moves itself away; they then tickle another part, which moves also; and so they proceed until the sleeper has gradually edged himself off the mattress (which in India lies on the ground), and then the thief marches off in triumph with his prize! Some persons can be partially aroused, so as to be able to answer a question, without being sufficiently awake to be cognizant of what is going on or to remember any of the matter afterwards. Those, therefore, who have any secrets to keep should be careful of their bed-fellows!

Another curious fact deserves to be here noticed. A person is taller in the morning, after sleep, than in the evening, before it. So well is this known in the Army, that when a man arrives to be measured in the evening, and is *just* under the standard, the sergeant says to him, "Come again in the morning, and you'll pass." And the explanation is that during the day the joints settle down into their sockets, from fatigue, &c.; but that during the night, the body being in a recumbent position, the joints loosen and slightly separate, and thus make the difference of half or three-quarters of an inch in a person's stature.

Sleep is essentially a period of rest—a repose of brain, body, and limbs, such as is typified by an infant's slumber. But we may also have a partial sleep—that is, one part may repose in a greater degree than another. A man who uses his bodily and muscular system in the open air—such as the farm-labourer, the mountaineer, the huntsman, or boating-man—enjoys a very different kind of repose from that of the speculative philosopher

or student, who has taken but scant, if any, exercise during the day. Then there are what are called "light sleepers," typified by the "quick-eared sergeant" who heard the night advance of the Russians, and prevented a surprise at the battle of Inkerman. Their system of volition has been so highly cultivated that it has become almost automatic, and they scarcely become thoroughly unconscious—or, at least, so lightly so that the least noise or disturbance restores them to the active use of the perceptive and sensorial faculties. These persons are prone to dreams, particularly after a late supper, and usually dreams of the nightmare class—vehement desires of performing some action and of being prevented from so doing. Then there are others who only sleep—or, rather, doze—by fits and snatches, the intervals being perfect wakefulness. I knew an instance of this—a lawyer who had writing materials and a shaded lamp placed at his bedside, and was in the habit of committing to paper during these intervals a large amount of work.

Sleep would be impossible if the action of all the organs of the body depended upon the constant exercise of brain-power, because, if this were so, the moment the brain went to sleep we should die. Our more important secretive and active organs, therefore, perform their functions automatically. They can, of course, be *influenced* through the emotions; thus, who has not at times felt his heart throb with some sudden joy?—nor had his breath taken away by fright or excitement? These effects, however, are of a temporary character and abnormal, and cease with the removal of their

cause. How beautiful is this arrangement, and how eminently adapted to its purpose! Unlike the works of man, God has so wonderfully constructed our vital system that by day, by night, untouched and unaided, the heart beats, the lungs respire, the glands secrete, and the other organs perform their allotted functions.

SOMNOLENT CONDITION OF BRAIN.

> "Then turn to-night, and freely share
> Whate'er my cell bestows;
> My rushy couch and frugal fare,
> My blessing and repose."
>
> GOLDSMITH.

THERE can be little doubt that, though it be the result of many causes, what we ordinarily call natural sleep is exclusively a cerebral effect due to the absence of blood. For it is well known that quite the opposite condition of the circulation of the brain—namely, congestion (such as we get by the administration of opium and kindred drugs), will give rise to sleep; but that is, of course, sleep of an artificial and unnatural kind.

To procure natural and healthy sleep we must, in some way or other, and to a greater or less degree, cause a withdrawal of the blood from the brain.



THE PROPER TEMPERATURE OF THE BODY.

"For my heart was hot and restless,
And my life was full of care."

LONGFELLOW.

THE normal temperature of the interior of the body is invariable. Amidst the snows of Siberia, or exposed to the hot blast of the sandy desert, a thermometer under the healthy tongue or in the armpit will always indicate about 98 degrees. The surface temperature, however, alters greatly, and our impressions of outward heat and cold vary very much in proportion to this surface temperature at the moment of observation—thus a person getting out of bed on a winter's morning gives a shiver, and feels the cold "strike into him," because the surface warmth of his body, under such circumstances, is low, and attributable to the non-conducting power of his external surroundings (at a time when the circulation is at its most quiescent state), and not the result of active exercise and a quickened circulation, and the increase of animal heat thereby produced. After violent exercise, on the other hand, such a temperature would be most agreeable.

Within certain limits, however, our senses give us very good evidence of the desirable surface temperature.

Does the body generally feel comfortable as regards heat or coldness? For a person with chilled feet, numbed hands, and stagnating blood may lie awake for hours from the sheer discomfort, if not actual pain, produced by the surface chill of his body; or in summer his skin may "burn," and his throat be parched, and he be unable to rest from these causes.

It has been said that the best test of the perfect action of any one bodily function is to be found in the absence of any manifestation of its powers; and in the same way we shall have arrived at the happiest temperature for the skin when it gives us no very decided indication either of heat or cold.

Some persons, in cold weather, use a hot-water bottle in bed, upon which they put their feet, and by this means restore the circulation, which had been previously impeded; but the disadvantage of this process is that it renders the feet more delicate and sensitive to cold at other times, and when once accustomed to a hot-water bottle a person cannot sleep without it. There is also the trouble of having hot water late at night, the weight to be carried upstairs, and the danger of the water leaking out. A much better plan, therefore, is to procure a common earthen tile (that which is called a Sole tile is the best), and having rubbed the edges smooth, to have a flannel bag made to fit it loosely; then, about an hour before it is wanted, to warm it in the oven; place it in its bag, wrap the bed-dress around it, and put it in the bed. It will contain sufficient heat to warm a person without injurious effects, and is very portable, cheap, and convenient. It is well in

winter to rub the body over before getting into bed with something woollen, to set up the circulation properly.

But then it is equally necessary not to be overheated in summer, and especially not to retire to bed with a head "all on fire." Dr. Franklin had a custom of standing for a few minutes after he had undressed before he went to bed, so as to get cool, and he considered that by so doing he procured more refreshing sleep than he could otherwise have obtained. Who does not remember being in bed with heated body and glowing temples, tossing from side to side in the vain hope of finding a cooler place; and, when the very pillow seemed to burn the skin, exclaiming, "Well, I never felt more awake in my life; I'm not a bit sleepy?"

One of the first essentials for sleep is that the body must be at ease and conscious of no disturbing element. Now, at a time when the body needs to be cool, the sensation of feeling hot and feverish becomes a disturbing cause, and that often of surprising potency, as above described, and recourse must therefore be had to cold-water bathing. There are many different methods of performing this operation, according to the taste and facilities of the individual—a shower bath, a complete immersion, a sponge bath, a sitz bath, a spray bath. The sort of bathing is of no consequence so long as it has the effect of cooling the surface of the body. The reaction also after cold bathing draws the blood from the head into the lower portion of the body, which is a necessary state for sleep. Cold bathing is also very

agreeable—a quality which must go far to recommend any remedy. And many a sound night's sleep will result from a cold bath.

THE PROPER STATE OF THE NERVES.

"Whilst trembling with a thousand fears,
Parch'd to the throat my tongue adheres,
My pulse beats quick, my breath heaves short."

BYRON.

SLEEP is naturally a state of repose, and not of excitement; therefore everything must partake of the former quality before sleep will supervene. To persons who are naturally prone to excitement of the nervous system this state may not be at first easy to acquire, and will need a good deal of resolution and perseverance. Certainly it will not do to *force* the nerves in any way, and persistent thought, as a rule, is one of the greater causes of sleeplessness. The difficulty lies in "getting off to sleep." We hear people say, "I can't get off to sleep; when I am once off it is all right, but the difficulty lies in getting off." Some persons go to bed in a highly nervous state, hoping that sleep may supervene and put them out of their trouble. One gentleman of my acquaintance has so far reduced this to a science that whenever he feels particularly worried or troubled he instantly lies down and composes himself to sleep, waking up free from his troubles altogether. He has formed a good habit, and can usually put it in practice.

Those who wish to have the power of going to sleep at will must adopt the same course: they must acquire the good habit by steady perseverance.

In ordinary cases it is worse than useless to go to bed and to expect to obtain sleep while the nervous system is in a state of high tension, because the sufferer will probably, in his excitement, be exceedingly restless, will try first one position and mode of inducement and then another, until he becomes more and more worried, and less and less disposed to sleep.

Some persons of great application keep their nervous and mental powers on the stretch all day long, and never suffer them to wander involuntarily. To such it will be a great relief to give the reins to fancy, and resign the control of will and thought. The act of losing, or rather loosing, control will frequently induce a sleepy state.

But to other people, who have had their mental systems less under control, and who are naturally of a visionary or romantic temperament, this plan would be of no use, as it would tend to prolong the ordinary daily routine; nor to those who have a morbidly irritable disposition, a self-disturbing mental system, for directly they laid their head upon the pillow they would become the butt of a thousand painful reflections of the day's doings—go over again a thousand incidents of an unpleasant character, every little worry which had happened to them, and finally wind up by intensifying a thousandfold their already irritable nervous condition. Such persons require a direct system of controlling the excited nerves, and of occupying the mental powers,

and they will find great assistance in pursuing one of the systems mentioned under the heading of Monotony—thus, if musical, they can run over very gently and dreamily (and quite regardless of expression or exactitude) some familiar piece of music, some selection —either vocal or instrumental—of a simple character. If gifted with linguistic powers, they may repeat some extract which memory has at hand from a foreign poet or orator; if arithmetical, some simple figure problem or small sum—anything, in short, which the very least effort of attention, and no expenditure of nervous power, will furnish. This trivial occupation will just keep away all irritating and disturbing thoughts, and employ (very gently) the attention until drowsiness supervenes and *ego* is lost in unconsciousness.

And here it may be remarked that certain things act forcibly upon the nerves of one individual and not upon those of others. Tea, coffee, music, hearty suppers, &c., produce different effects according to the individual who indulges in them. A general rule is impossible, and the best method is to observe the effect produced by various things and act accordingly. But in any case a good interval should elapse between the work state of the day and the repose state of the night. The orator straight from the rostrum of his triumphs, the poet fresh from his world of fancy, the chemist from his lecture, are in no condition to go to sleep immediately—they need a preparatory state, a sort of *getting into* a somnolent condition. The best plan is to read a pleasant book, to have a smoke or chat, or to take part in some simple amusement until

the nerves are properly soothed. Just as in a classical piece of music, when the climax is reached, the tones begin to mellow, the intervals to lengthen, the chords to be more in unison, until the sounds fade softly away into silence, so the evening's occupation should lull the excited work nerves, and shed a calmness over the whole being, until exhausted nature claims its sweet repose.

THE STATE OF MIND FAVOURABLE TO SLEEP.

"How many thousand of my poorest subjects
Are at this hour asleep! O Sleep! O gentle Sleep,
Nature's soft nurse, how have I frighted thee,
That thou no more wilt weigh mine eyelids down,
And steep my senses in forgetfulness?
* * * * *
Wilt thou upon the high and giddy mast
Seal up the ship-boy's eyes, and rock his brains
In cradle of the rude imperious surge
And in the visitation of the winds,
Who take the ruffian billows by the top,
Curling their monstrous heads and hanging them
With deafening clamour in the slippery clouds,
That with the hurly Death itself awakes?
Canst thou, O partial Sleep! give thy repose
To the wet sea-boy in an hour so rude,
And in the calmest and most stillest night,
With all appliances and means to boot,
Deny it to a king?"

SHAKSPEARE.

SLEEP necessitates a quiescent mind, and will not brook an active one. There must be no mental work in bed. Yet how often is this rule transgressed! The

musician composes mentally his oratorio, the artist paints mentally his picture, the philosopher mentally produces his elaborate paper, in bed. Not content with cudgelling his brain during the livelong day and evening, he still allows his thoughts to linger upon the favourite subject, and when he lays his head upon the pillow under these circumstances he gets no sleep, because he does not fulfil one of the primary conditions for obtaining it. He is thinking and working, not going to sleep. *There must be no thinking in bed.* A person does not go to bed to think; he goes to bed to sleep. Thinking is carrying on the brain-action; sleeping is leaving it off. Thinking and sleeping are inconsistent, and will never be concurrent. Let all the thinking be done out of bed, and; once in bed, let sleep reign supreme and banish everything else.

THE WILL IN RELATION TO SLEEP.

"As I lay in my bed slepe full unmete
Was unto me, but why that I ne might
Rest I ne wist, for there n'as erthly wight
(As I suppose) had more of hertis ese
Than I, for I n'ad sicknesse nor disease."

CHAUCER.

SLEEP is, to a very great extent, dependent on the will. To parody a well-known quotation, "*To sleep or not to sleep, that is the question.*" And it is a question which is often not asked, and still seldomer answered,

by the sleepless. Many persons imagine that sleep is a kind of accidental effect, without rules, characteristics, or dependencies.

Sleep, however, is a most regular process, the inevitable result of certain fixed causes. When these are inoperative the sufferer lies awake; whilst, when they act properly, sleep follows as the night the day.

Philosophers tell us that it is impossible for two bodies to occupy the same space at the same moment. They might also say that it is impossible for any one to be performing two utterly inconsistent labours at the same moment—trying to go to sleep, and yet doing the thing which will certainly keep them awake. Either renounce the one or the other; make up your mind that everything shall yield to sleep, or else try not to go to sleep at all. The determination must be absolute, though the mode of putting it in action may be of the gentlest. Having decided that sleep shall be paramount, gently put aside everything else, and that without arguing the question as it arises. Like "the gallant six hundred" of whom the Laureate sings so spiritedly, it must be yours "not to reason why," yours "but to *do*." Now the human will is so constituted that the easier way not to do *one* thing is to do another quite different from it. A person is more likely to avoid drowning by keeping *off* the ice than by going on it with all the cork jackets in the world. And the best way to avoid thinking upon any of the subjects which would keep him awake is to turn his attention to something which is pretty sure to send him to sleep. Unfortunately, however, the persons who are most

troubled with insomnia are persons of excitable temperaments, weak nerves, and capricious wills. Even when they admit the necessity of abstinence from causes likely to keep them awake, they feel powerless to practise it. "Things will keep coming into one's head," they say, "and then I get thinking, and the pillow grows hot, and I can't go to sleep." Napoleon is said to have observed that "there was no such word as 'impossible,'" and most people who have taken the pains to try it have fully corroborated the great soldier's opinion. But success is often a matter of no little difficulty, and requires considerable perseverance. "Little strokes fell great oaks," says the proverb, and those who make up their minds to apply the sense of this saying to going to sleep will soon find out that it is not so impossible as at first sight it appeared to be. Human nature has a wonderful way of adapting itself to habits. Persons who accustom themselves, by an exertion, to do periodically any particular action soon discover that they can do it by habit only; and those who at first find difficulty in dismissing everything for sleep will soon discover that, by constant practice, they at last come to do it involuntarily; and the sleepless in this way will be able, by steady perseverance, to dismiss the cares and troubles of the mind as easily as the teacher dismisses his scholars at the play-hour. Depend upon it, nothing will be of use unless it has the sanction and co-operation of the will and of a steady perseverance. It may be objected that the mere fact of its requiring such an exercise of will, will be an exciting cause sufficient to counteract the effect of the

monotony; and at first, perhaps, it may be; but this will soon wear off, just as the noise of the miller's wheel does to its hearer; and when once the habit of abstraction has been formed, the brain will perform the function automatically, just as it does in the act of memory, by association; and when the body lies down to rest in bed, the association of that position and surroundings will immediately suggest and carry out the necessary change of thoughts, and it will become as easy to dismiss all the business, pleasure, and duties of the day as before it was to dwell upon them.

EXERCISE NECESSARY FOR SLEEP.

"God hath set
Labour and rest, as day and night, to men
Successive; and the timely dew of sleep,
Now falling with soft slumbrous weight, inclines
Our eyelids: other creatures all day long
Rove idle, unemploy'd, and less need rest.
Man hath his daily work of body or mind
Appointed, which declares his dignity,
And the regard of Heaven on all his ways."

MILTON.

ONE of the greatest provocatives of sleep is the fatigue of body caused by healthy labour. As Sydney Smith says, "A good stout body being provided, some labour must be found for it." Now this labour need not be excessive, since it is quite possible for a person

to be "over-tired," and unable to sleep from that cause. But some kind of exercise must be taken every day; and outdoor exercise, where possible, is the best of all. Persons engaged in occupations which involve physical labour do not need other exercise, since their calling provides them with it naturally, but those persons who have no natural exercise must take some by rule. Outdoor walking is one of the best exercises, since the walker breathes fresh pure air, and more of it than when remaining still. His heart quickens its beat. The various functions of the body are stimulated, and the small fatigue lays up in store a good sound night's sleep. Boating and horse exercise are admirable means to the same end; and here it may be remarked that sleep is a naturally healthy condition—that is to say, a person in good health, and free from unnatural causes, ought to enjoy sound and refreshing sleep; and his not doing so is a sign that something is amiss and requires correcting. A turning-lathe has furnished many persons with the needful occupation. Sir Isaac Newton was fond of carpentering. Ladies pay visits. Many persons compromise the matter by riding out in a carriage, and though this, if the wind be cool and fresh, does give the so-called "mouthful of fresh air," it is but a poor substitute for more active exertion. "In the days of good old Queen Bess," when (as we read) the best streets were so ill-paved that carriages had occasionally to be dug out of the quagmires into which the wheels had run, or so rough and uneven that only the strongest springs would stand the shaking, a carriage drive really deserved the name of outdoor exercise; but now-a-days,

when asphalte, wooden pavements, steam-rollers, &c., &c., have smoothed down all the inequalities and mended all the holes of our roads, there is little more exertion required in carriage-riding than in sitting in an arm-chair at home, and it scarcely deserves the name of exercise at all.

Croquet has often been described as a capital opportunity for flirtation; so have the ball-room and the skating-rink—in fact, so has every place where one sex does or may encounter the other. But the deliverers of this mighty aphorism forget that along with the possibility of matrimonial projects being there initiated lies the fact that persons under the influence of the mild excitement caused by the congregation of kindred minds take a great deal of healthy exercise, endure a great deal of real fatigue, and perform an amount of exertion that would be hardly credited if the conditions under which it is performed were removed. A lady skating round a rink or dancing round a ball-room (particularly when in the society of an agreeable companion) travels at great speed over a considerable distance. The excitement keeps up the spirits of the fair athlete, the needed exercise is obtained in a pleasant form, and the gain in healthy appetite, spirits, and sound sleep is abundantly apparent.

Open-air exercise in the summer—especially in the morning—is most desirable; it shakes off the relaxation of the night, braces up the nervous system, and conduces to the attainment of vigorous health, which means, in its turn, sound and refreshing sleep.

Milton says—"In winter, often ere the sound of any

bell wakes man to labour or devotion; in summer, as oft with the bird that first rouses, or not much tardier, to read good authors, or to cause them to be read, till the attention be ready or memory have its full fraught; then, *with clear and generous labour, preserving the body's health and hardiness*, to render lightsome, clear, and not lumpish obedience to the mind, to the cause of religion and our country's liberty," Smiles, in his admirable work "Self-Help," says—"In this age of progress we find so many stomachs weak as blotting-paper; hearts indicating fatty degeneration; unused, pithless hands; calfless legs and limp bodies, without any elastic spring in them. But it is not merely health that suffers by neglect and disuse of the bodily organs: the mind itself grows sickly and distempered, the pursuit of knowledge itself is impeded, and manhood becomes withered, twisted, and stunted. It is, perhaps, owing to this neglect of physical exercise that we find amongst students so frequently a tendency towards discontent, unhappiness, inaction, and reverie, displaying itself in a premature contempt for real life and disgust at the beaten tracks of men—a tendency which in England has been called Byronism and in Germany Wertherism. The only remedy for this green-sickness in youth is abundant physical exercise—action, work, and bodily occupation of any sort." Daniel Malthus used to say to his son—"Every kind of knowledge, every acquaintance with nature and art, will amuse and strengthen your mind, and I am perfectly pleased that cricket should do the same by your arms and legs. I love to see you excel in exercises of the body, and I think

myself that the better half—and much the more agreeable part—of the pleasures of the mind is best enjoyed while one is upon one's legs." The Duke of Wellington, when once looking on at the boys engaged in their sports in the playground at Eton, where he had spent his own juvenile days, made the pregnant remark—"It was there that the battle of Waterloo was won." There can be no good sleep without good health, and there can be no good health without good exercise. The one cannot exist without the other, any more than the shadow can exist without the substance, or the echo without the sound.

A PROPER AMOUNT OF SLEEP.

"What is more gentle than a wind in summer?
What is more soothing than the pretty hummer
That stays one moment in an open flower
And buzzes cheerily from bower to bower?
What is more tranquil than a musk-rose blowing
In a green island, far from men's knowing?
More healthful than the leafiness of dales?
More secret than a nest of nightingales?
More serene than Cordelia's countenance?
More full of visions than a high romance?
What but thee, Sleep?"

KEATS.

KING ALFRED is said by Hume to have divided the day of twenty-four hours into three equal portions, averring that eight hours of business, eight of study and devotion, and eight of food, sleep, and exercise

constituted the proper division and mode of enjoying life. Bishops Jewell and Burnet rose every morning at four; Sir Thomas More did the same thing. Baxter says four hours, Wesley (who lived to eighty-eight) says six, and Sir John Sinclair eight hours, constitute the proper period for sleep. Lord Chief Justice Coke laid down the rule:

> "Six hours in sleep, in law's grave study six,
> Four spend in prayer, the rest on nature fix."

This has been somewhat modified by Sir William Jones:

> "Six hours to law, to soothing slumber seven,
> Ten to the world allot, and—all to Heaven."

General Elliott never slept more than four hours; James Mackay, of Skerray, who lived to be ninety-one, had never slept more than four hours in the twenty-four; Frederick the Great and John Hunter only took five hours' repose at a time.

Some people say, "Six hours' sleep for a man, seven for a woman, and eight for a fool." Though this dictum sounds rather too crude, it certainly does appear that persons of intense mental activity sleep but a short time; yet during that period they sleep very soundly. Napoleon took but little rest when engaged upon any great work. Paganini rarely slept, so entirely was his mind occupied night and day in his passion for music. Lord Eldon possessed enormous working powers, and could do with much less sleep than less gifted mortals. These celebrated persons seem to have been able to set the ordinary laws of health at defiance, and work as long as they desired, rather than as long

as they should have done. Humbler individuals will find great advantage, to the nervous system at any rate, by adopting a regular period of sleeping. The human system is, in a normal condition, extremely regular. The heart beats regularly, the functions act regularly, the respiration is regular, hunger and thirst are regular, therefore the natural inference is, that sleep and rest should be regular. In the lower animals the greatest benefit accrues from regular feeding and exercise, and those pets, whether large or small, will always thrive the best and look the smartest to whom a prudent care secures a methodical round of treatment. In fact, so well is this known, that in stuffing ortolans a method is followed by which a certain amount of food is given to them, and then they are shut up in a dark box to sleep, during which period the food digests and becomes assimilated to the system. Then so much exercise is given, and then a fresh lot of food, and by this regular mode of treatment they are rapidly brought to (eatable) perfection.

One of the most noticeable instances of the minimum amount of sleep being taken is the case of W. Gale's walk of 1,500 half-miles in 1,000 half-hours, at Lillie Bridge, which was done to eclipse a similar feat of Captain Barclay in 1809, who walked 1,000 miles in 1,000 hours. Gale started with the bell at each half-hour. Captain Barclay, however, walked during any period of the hour he chose; thus by walking two miles together he was enabled at times to take an hour and a half's rest at once. Notwithstanding, however, his chief difficulty was in his contest with the intense

desire to sleep, and, undoubtedly, one of the chief features of the great walk is the extraordinary power of endurance that Gale exhibited in overcoming any inordinate tendency to drowsiness. In Barclay's case all sorts of artificial means had to be resorted to in order to arouse him when once he had gone to sleep; on the other hand, Gale seems to have been free from any danger on this score. "During the whole of yesterday" (says the *Times*) "the ringing of a small handbell from the balcony of the judge's stand was sufficient to arouse Gale, who, during the whole of his long walk, has appeared, without fail, to the moment ready to start upon his journey. The only difficulty on the score of sleepiness that has arisen is when on one or two occasions he has dropped off during his walk and fallen on the path, but in such case he has quickly recovered himself and proceeded on his way." This might do for once for the plucky little watchmaker; but let not every one fancy himself a Gale.

The requirements of each individual differ, and it would be impossible to lay down a hard and fast rule which would suit all alike. Thus children and persons of infirm or delicate health are benefited by longer repose, because their sleep is at all times very light, and their functions, nerves, &c., are naturally languid and incapable of prolonged exertion; plenty of rest to them is an absolute necessity, and were they to neglect to take it illness must follow. Those, on the other hand, whose bodily strength is good, whose nerves are in firm order, and who do not have any very severe physical exertion to undergo, can and

may take the minimum of slumber. Seven and a half hours is a good medium to start with—to go to bed at eleven and to rise at half-past six, or to go to bed at twelve and rise at half-past seven. Some people would think this period short, or at any rate the time of rising too early for London, whatever may be suitable for the country; but here again the conditions of life must be taken into account. In the country people have early habits. Spending the day mostly in the open air, and with abundant exercise, whether of walking, riding, or what not, the body naturally becomes tired. Reading, smoking, &c., in a comfortable chair very soon produce a haziness in the room, a growing unconsciousness of everything around, the head drops on to the breast, and the individual starts up, saying, "Bless me! I was *nearly* off to sleep." And it is not very long before he *is* off to sleep in his own bedroom. But in towns, where many opportunities of conveyance exist, whether omnibuses, underground railways, cabs, &c., people generally ride to economise the time, and when at their office they sit still perhaps all day long. Ladies, too, adopt similar habits during the day, and when evening comes it brings its round of quiet pleasure and amusements, or light work, and, not being physically tired, "frequent sips prolong the rich repast," and so time has commonly arrived at the small hours before bed is thought about. Going to bed late necessitates rising late, and thus it is that town life, from a dormitory point of view, is so different from country life. An article appeared a little while ago in one of the public papers tending to show that no time was so healthy in London or other great

towns as during the night, when no dense smoke-fumes polluted the atmosphere, no traffic raised a dust in the streets, and the fresh air had it all to itself. It was rather a curious problem to propose, but there were several arguments raised which appeared to support the theory laid down. There are many persons to whom the night is necessarily the period of working. Public journalists, postmen, doctors, nurses, policemen, watchmen, &c., all have at times to "turn night into day," and, as far as experience seems to point, they do not suffer by so doing, so long as other things are properly regulated.

Too much sleep does engender lethargy and heaviness, and a tendency (to those who are inclined to it) towards the increase of the fatty tissue. There is the case of the Strasbourg goose, which, by being kept warm, well fed, and always at rest, soon develops a fat liver. Those who sleep too long, particularly when given to taking rich food, and *not* given to taking much exercise, should think of the fate of the Strasbourg goose. On the other hand, it may be urged that (as already mentioned) to some persons sleep of considerable duration may be a positive benefit, and it curiously enough happens that those to whom it would be most beneficial are those to whom it comes the seldomest and the briefest; the same causes which produce the need of it drive it away, or, rather, prevent its coming. Persons of excitable nerves and temperaments are often very sleepless, yet have great need of rest, their nervous system being finely-balanced, and so abnormally active when excited, that it should be their great effort to obtain as much

repose as possible, in order to give their exhausted nutritive and reproductive powers an opportunity of re-establishing themselves. It has been laid down by eminent medical authorities that the assimilation of the food eaten takes place most readily during the period of rest and sleep.

How needful it is, therefore, that those who have weak digestive or assimilative powers should leave their organs plenty of opportunity for performing their important functions! For it will be next to impossible for those organs, already very delicate and feeble, to complete their several tasks if the bodily energy, which should be their motive power, is employed in some other way—in the brain, for instance, or the muscular nerves of locomotion. Again, persons of weak or enfeebled mental powers—the hypochondriac, the aged, &c.—will find that sleep drives away all their apprehensions, pains, and troubles, and restores to them, at least for awhile, the sweetness of a contented mind in a painless body.

An occasional nap (not just after dinner, though) is also a capital means for dispelling the sleepiness engendered by the heated atmosphere of a crowded ball-room, or the soreness of the eyes which is produced by a cold wind or over-exertion of reading, drawing, &c. Many persons who have to read much at night find, on sitting down to their task, that their eyes are smarting so that reading becomes extremely difficult, if not quite impossible. "Forty winks," as it is called, will at once settle the matter, and enable them to wake up and continue their task with pleasure.

Another word of advice is, that sleep should be looked upon as an imperative duty, and have its regular period assigned to it, and not be left, as it too often is, to take its chance "happy go lucky." For instance, a person is going a journey, everything is driven off to the last, parties are "gone to," theatres visited, dinners given, &c., and the packing up, which always takes "a deal longer than was expected," is left till the last, and not commenced until very late at night,—then so many little matters have to be attended to which were unforeseen, that half the night is wasted in trying to arrange things in a little like order, the consequence of which is that a very short night's rest has to be taken, and the traveller wakes up, or, rather, is called up, unrested and unrefreshed! A little prudent arrangement would have obviated this, and yet have allowed plenty of time for fulfilling the calls of friendship and of hospitality. An amusing instance of a want of success in this direction is related by the late Mr. Poole:—

"Having an appointment of some importance for the eighth of January, I had settled that my visit (in Bristol) should terminate on the twelfth night. Walking along Broad-street, I went into the coach-office.

"'So, sir,' said I to the bookkeeper, 'you start a coach to London at five in the morning?'

"'Yes, sir,' replied he, with the most perfect nonchalance.'

"'You understand me? At *five* in the MORNING?'

"'Yes, sir; five to a minute—two minutes later you'll lose your place.'

"'And would you, now, venture to *book* a place for me?'

"'Let you know directly, sir. (Hand down the "Wonder" Lunnon book there.) When for, sir?'

"I stood aghast at the fellow's coolness! After a momentary pause—

"'For to-morrow,' said I.

"'Full outside, sir; just one place vacant *in*.'

"The very word *outside* bringing forcibly to my mind the idea of ten or a dozen shivering creatures being induced, by any possible means, to perch themselves on the top of a coach on a dark, dull, dingy, drizzling morning in January, confirmed me in my belief that the whole affair was what is vulgarly called a 'take in.'

"'So you *will* venture, then, to book a place for me?'

"'Yes, sir, if you please.'

"'And perhaps you will go so far as to receive half my fare?'

"'If you please, sir—one pound two.'

"'Well, you are an extraordinary person; perhaps, now, you will carry on the thing so far as to receive the whole?'

"'If you please, sir—two pound four.'

"I paid the money, observing, at the same time and in a tone calculated to impress his imagination with a vivid picture of attorneys, counsel, judge, and jury—

"'You shall hear from me again.'

"'If you please, sir; to-morrow morning at five *punctual*—start to the minute, sir. Thank ye, sir. Good morning, sir.'

"And this he uttered without a blush!!

"I returned to Reeves' Hotel, College-green, where I was lodging. . . . .

"The individual who at this time so ably filled the important office of 'Boots' at the hotel was a character. Be it remembered that, in his youth, he had been discharged from his place for omitting to call a gentleman who was to go by one of the morning coaches, and who, in consequence of such neglect, missed his journey. This misfortune made a lasting impression on the intelligent mind of Mr. Boots.

"'Boots,' said I in a mournful tone, 'you must call me at four o'clock.'

"'Do'ee want to get up, zur?' inquired he, with Somersetshire twang.

"'Want it, indeed! No; but I must.'

"'Well, zur, I'll carl 'ee; if you be as sure to get up as I be to carl 'ee, you'll not knoa what two minutes arter vore means in your bed. Sure as ever clock strikes I'll have 'ee out, danged if I doan't! Good night, zur.'

"'And now I'll pack my portmanteau.'

"It was a bitter cold night, and my bedroom fire had gone out. There lay coats, trousers, linen, books, papers, dressing materials in dire confusion about the room. In despair, I sat me down at the foot of the bed and contemplated the chaos around me. My energies were paralysed; so, resolving to defer the packing till to-morrow, I got into bed.

"My slumbers were fitful — disturbed. Horrible dreams assailed me. Series of watches, each pointing to the hour of *four*, passed slowly before me, then time-

pieces, then large dials, then steeple clocks, and, last of all, Old Time with an hourglass; he grinned at me, struck four blows, audible blows, with the handle of his scythe on my breast, stooped his huge head, and shrieked in my ear—

"'Vore o'clock, zur; I say it be voro o'clock!'

"It was the awful voice of Boots!

"'Well, I hear you,' groaned I.

"'But I doan't hear you. Vore o'clock, zur.'

"'Very well, very well—that'll do!'

"'Beggin' your pardon, but it woan't do, zur. 'Ee must get up—past vore, zur.' . . . .

"And here he thundered away at the door; nor did he cease knocking till I was fairly up, and had shown myself to him in order to satisfy him of the fact.

"'That'll do, zur; 'ee told I to carl 'ee, and I hope I ha' carl'd 'ee properly.'

"I lit my taper at the rushlight. On opening a window-shutter I was regaled with the sight of a fog, a parallel to which London itself, on one of its most perfect November days, could scarcely have produced. A drizzling rain was falling. My heart sank within me. It was now twenty minutes past four. I was master of no more than forty disposable minutes, and in that brief space what had I not to do! The duties of the toilet were indispensable—the portmanteau *must* be packed—and, run as fast as I might, I could not get to the coach-office in less than ten minutes. Hot water was a luxury not to be procured. The water in the jug was frozen, but by dint of hammering upon it with the

handle of the poker I succeeded in enticing out about as much as would fill a teacup. The soap was cemented to the dish—my shaving-brush was a mass of ice. In shape more appalling Discomfort had never appeared on earth. I approached the looking-glass; even had all the materials been completely thawed, it was impossible to use a razor by such a light.

"'Who's there?'

"'Now, if 'ee please, zur; no time to lose; only twenty-five minutes to vive.'

"I lost my self-possession—I have often wondered *that* morning did not unsettle my mind.

"There was no time for the performance of anything like a comfortable toilet. I resolved, therefore, to defer it altogether till the coach should stop to breakfast. 'I'll pack my portmanteau: that *must* be done.' *In* went whatever happened to come first. In my haste, I had thrust in amongst my own things one of mine host's frozen towels. *Everything must come out again.*

"'Who's there?'

"'Now, zur; 'ee'll be too late, zur.'

"'Coming!'

"Everything was now gathered together—the portmanteau would not lock. No matter, it must be content to travel to town in a *déshabillé* of straps. Where were my boots? In my hurry I had packed away both pairs. It was impossible to travel to London on such a day in slippers. Again was everything to be undone.

"'Now, zur, coach be going.'

"'I'm coming,' again replied I, with a groan. 'I have only to pull on my boots.'

"They were both left-footed! Then must I open that rascally portmanteau again?

"'Please, zur——'

"'What in the name of the —— do you want now?'

"'Coach bo gone, please, zur.'

"'Gone! Is there a chance of my overtaking it?'

"'Bless 'ee! noa, zur; not as Jem Robbins do droive. He be vive mile off by now.'

"'You are certain of that?'

"'I warrant 'ee, zur.'

"At this assurance I felt a throb of joy. 'Boots,' said I, 'you are a kind-hearted creature, and I will give you an additional half-crown. Let the house be kept perfectly quiet, and desire the chambermaid to call me——'

"'At what o'clock, zur?'

"'This day three months, at the earliest!'"

In some countries criminals are punished by being deprived of sleep, and anything more relentlessly barbarian can scarcely be imagined. Dr. Forbes Winslow says—"A Chinese merchant, who had murdered his wife, was sentenced to die by being deprived of sleep. He was placed in a strong room, and guarded day and night by inexorable gaolers, who continually awakened him on his exhibiting any symptoms of dropping off into sleep. His torments became so excessive that, on the eighth day, he begged them to kill him outright, in any manner they chose, rather than endure the slow and horrible death allotted to him. But nothing could alter the stern determination of the sentence, and at the end of nineteen days he died from exhaustion."

Damiens, who attempted the assassination of Louis XV. of France, and who was sentenced to be torn in pieces by four horses, was for an hour and a half before his execution subjected to the most infamous tortures, with red-hot pincers, melted lead, burning sulphur, boiling oil, and other diabolical contrivances, yet he slept on the rack, and it was only by continually changing the mode of torture, so as to give a new sensation, that he was kept awake. He complained, just before his death, that the deprivation of sleep was the greatest of all his torments.*

Some animals have the faculty of sleeping for months together: the dormouse, the hedgehog, and the serpent are supposed thus to slumber. Having laid in a stock of nutriment and eaten themselves quite fat, they curl up, and this provision suffices to maintain their vital functions while the ground is frozen up and the supply of their natural food cut off. By this means they are enabled to exist when no nourishment can be obtained. But man does not need sleep more in winter than in summer. He generally does sleep more, because the daylight is shorter and the mornings less inviting to "turn out;" but it is rather from choice than necessity. Some persons, when they have been out to a dance which has been prolonged until early the next morning, make a practice of not going to bed at all; they have a good walk, and so try to get rid of the feeling of fatigue. But what a poor substitute for a good night's rest! and how sleepy and heavy they feel all next day, and how *very* sleepy and how *very*

* Dr. Hammond.

heavy they feel on the following evening, when the excitement has subsided and the relapse occurs! Surely it would be better to leave a few of the dances undanced than thus to cheat the body out of its natural and proper rest.

DIET IN RELATION TO SLEEP.

"He from forth a closet brought a heap
Of candied apple, quince, and plum, and gourd:
With jellies soother than the creamy curd,
And lucent syrops, tinct with cinnamon;
Manna and dates, in argosy transferr'd
From Fez; and spiced dainties, every one,
From silken Samarcand to cedar'd Lebanon."

KEATS.

DR. LANKESTER, in his "Popular Lectures on Food," says—"The question of food lies at the foundation of all other questions. There is no mind, no work, no health, no life, without food; and just as we are fed defectively or improperly, so are our frames developed in a way unfitted to secure that greatest of earthly blessings—a sound mind in a sound body." Now, as sleep essentially depends upon the health of the body, it naturally follows that food must have a great influence for good or evil. And how many people, from taking food at improper periods, or from eating food which they could not digest, or which disagreed with them, have had to spend half the night in unavailing lamentations on their inadvertency or want of self-denial!

There is great disparity between the digestive powers of one individual and those of another. As the faces of no two people are exactly similar, so the digestive powers of one individual differ from those of his neighbour. One person can sit down to a late supper and eat heartily of a joint of meat, can drink a bottle of wine and a glass or two of spirits by way of a night-cap, and then go to bed and enjoy one of the soundest sleeps possible; whilst another, if he partakes of the least bit of pastry or cheese, is up half the night with frightful pains of indigestion. Sleep does not take kindly to digestion, although it does to assimilation (absorption of the digested food into the system); so that persons who are at all liable to attacks of indigestion should never eat meat or other solid food within four or six hours of retiring to rest.

Many persons, too, by taking meat and other heavy food in a hearty supper just before going to bed find that their *early* sleep is disturbed, and that they are very heavy in the morning, when the hour of rising approaches. "Nothing will ever secure good sleep but good digestion. If digestion is disturbed, or, if healthy, it is still active on going to bed, sleep may be heavy but will not be refreshing. Three hours should pass after a good meal before going to bed."* Of course, it is not well to go to bed actually hungry, because then the inconvenience of the feeling will form a disturbing element, and so prevent the approach of sleep. If such persons require some kind of food, let them have one or other of the preparations of light farina-

* Dr. Parkes.

ceous stuffs which abound so plentifully in the market. Gruel, corn-flour, &c., &c., or even beef-tea, offer an almost endless variety if combined with different flavours. This may be occasionally exchanged for a biscuit soaked in spirits and water, a dry crust in wine, or a cup of cocoa. Yet how often is seen that *sad* spectacle of a person taking a hearty supper whilst making the remark to those around—"I know I shall be ill after eating this!"—conscious of the suffering in store, and yet unable to resist the inclinations of a capricious appetite! All the hearty or heavy meals should be taken, if possible, in the middle or at the close of the day, after moderate exercise, when the digestive powers have been stimulated into vigorous exertion, and are capable of any amount of hard work; but to take a hearty meal when the body is tired and needs rest and repose, and when all the functions of the body are jaded and relaxed, is very unwise, laying up in store, as it generally does (except in the strongest constitutions and most powerful digestions), a vast load of misery and disquiet for the remainder of the night.

Tea is to some, and, indeed, to many persons, an ticle to be most carefully watched. It is described by Dr. Lankester as a great sedative and preventive of waste in the animal tissues. And who has not felt, when irritated by the world's rough jostle, the delightful soothing effect of a cup of tea? Along with this charming quality as a sedative and encourager to quiet work, tea has, however, a most decided action as a stimulant on the nervous system. Up to a certain point this is most agreeable and desirable, but beyond

it is most pernicious. Tea, particularly when in a strong decoction, taken late at night, has to persons who have had but little exercise during the day the effect of preventing sleep. It is for this quality that those who have to sit up late at night drink large quantities of strong tea. Persons who complain of insomnia should put a padlock upon the teapot, and never, on any occasion, use it late at night; for a cup of tea, however delicious, is, after all, but a sorry substitute for a good night's rest.

Coffee has much less effect as a nerve stimulant, though sometimes it also has the effect of producing sleeplessness. Perhaps the best way is to dilute it with milk, which makes the flavour more agreeable, and lessens the chance of its attacking the nervous system. Cocoa is a much better and safer substance than either, so is cocoatina, which has the flavour of cocoa without any of the fat or thickening matter sometimes put into the so-called soluble cocoas. Either of these beverages will agree with the most delicate stomach, which is more than can be said of either tea or coffee.

There is a pretty Swiss story which illustrates forcibly the importance of sleep dietary. Two cantons having a disputed boundary agreed, at last, to determine the true line as follows:—Each canton was to provide a runner, who was to start, at cockcrow, from the opposite and farthest boundary of their respective territory, the place of meeting being the future line of frontier. One of the cantons shut their bird up in his cage hungry, and as soon as it was light

the poor hungry cock began to crow lustily for some food. Off went that runner at the signal, and ran an immense distance. The other canton fed their cock well the night before, to make it lusty and eager to crow in the morning; but when the morning did come, and all the people waited despondingly about its cage for the signal, it slept on and on, until the first starter had almost reached the sleepy bird's cage. At last the bird awoke when too late, and all the vanquished canton could obtain in mitigation of their defeat was, to be allowed to have the conqueror carried on the back of the vanquished runner, and thus to determine the boundary. This the poor champion did as long as his strength lasted, and then he fell down and expired on the spot! Those who wish to avoid imitating the well-fed cock should eat spare suppers.

A glance at any work on food (of which there are so many of an excellent character now published) will show that different foods require different periods of time for digestion. Thus we may begin with fresh eggs whipped, fresh salmon-trout, boiled or fried, venison steak (broiled), which take about one hour and a half to digest, and go on by various stages to boiled cabbage and roast pork, which take about five hours to digest. Many persons suffer in another way from injudicious dieting—they are constantly in need of aperient and antibilious medicines. In the interval they are martyrs to oppression, heat, burnings, headaches, and sleeplessness; and afterwards, from the effect of the powerful medicines they are obliged to employ, they find so much lassitude and relaxation that they are

scarcely able to take the physical exercise necessary to obtain a fair night's repose.

Some kinds of food and drink have a distinctly astringent character, whilst there are others almost certain to have an unpleasant effect on persons naturally prone to be bilious. It is scarcely within the province of this work to discuss the merits of the various kinds of food, but as sleep is a natural and healthy state, anything which has a tendency to derange the normal state will assuredly go far to prevent sleep. A little attention to these things will soon remove all their baneful effects.

MODE OF LIVING.

"That they may drink in pearl and couch their head
In soft, but sleepless down; in rich, but sleepless bed."

PHINEAS FLETCHER.

DR. FORBES WINSLOW says that "persons actively engaged in literary pursuits, whose occupation absorbs a large amount of nervous energy, are subject to conditions of insomnia." The author, engaged upon a favourite book, perhaps rises late, and eats a little breakfast; his letters, &c., occupy him till lunch; then visitors wile away the afternoon; and he, having taken no exercise, sits down to a dinner for which he has no appetite. Savoury dishes, rich sauces, and condiments tempt his palate; his mind excited, he swallows his dinner hastily, anxious, like Dominie Sampson, to get back to his books: he then sits down to write, and

continues far into the night, rousing his flagging energies with frequent cups of strong tea; and when at last the timepiece points to the small hours of the night, or rather morning, he glides up to bed with his nervous system overstrung, and his whole nature in a state of feverish restlessness.

He lays his burning head upon the pillow, turns from side to side, and complains that he cannot go to sleep, wishing, perhaps, that he was one of the characters in his work, a poor agricultural labourer, whose simple tastes and natural habits furnish him with the healthiest and soundest sleep! But now mark the different habits of the latter individual. He rises early, and steps out into the fresh morning air, walking to his work while Nature clears away the misty curtains of the night. He eats frugally, when hungry, of the simplest diet, and his open-air exercise furnishes him with the best of sauces—a hearty appetite. His day's work done, he plods homeward to his rustic cottage to enjoy his well-earned repose, and when he seeks his pillow, with mind at ease and nerves at rest, he sinks off immediately into sound and hearty slumber. Every one, it may be advanced, cannot be an agricultural labourer, neither could the whole world pass the day in the open air upon rustic diet. True; but in proportion as the *essentials* of that form of life are complied with—open-air exercise, simple digestible food, regular hours (and early if possible), together with a little attention to two or three matters of detail, so will come

"Innocent sleep;
Sleep that knits up the ravell'd sleave of care."

And what a moral this points—that the simple rustic should be always able to command a necessity of life which the clever and cultivated *savant* finds a difficulty in procuring!

THE AFTER-DINNER NAP.

"The hour was late, the fire burned low,
The landlord's eyes were closed in sleep,
And near the story's end a deep
Sonorous sound at times was heard,
As when the distant bagpipes blow.
At this all laughed; the landlord stirred,
As one awaking from a swound,
And gazing anxiously around,
Protested that he had not slept,
But only shut his eyes, and kept
His ears attentive to each word."

LONGFELLOW.

If there is one thing more delicious than another in this life, it is a quiet forty winks after dinner. There may be the sleep after a day's shooting or boating, or there may be the drowsy slumber after a drive in the cold frosty air of a winter's day, but as a delicious period of complete repose neither of them can compare with the after-dinner nap.

There is a calm feeling of satisfaction pervading each member of the body, along with a sense of gratified desire. The appetite has been appeased, and the whole body is conscious of gentle repletion. The aldermanic soup, the delicate red mullet, the heath-flavoured

grouse, the Francatellian *entremet*—each is submitting gracefully to the process of digestion. A feeling of contentment steals slowly over the senses, the outward sounds grow fainter and fainter, the paper drops from the relaxed hands, the world recedes further and further, the head droops backwards, and nothing remains but the deep and regular breathing of the sleeper!

But beautiful and peaceful as this practice is, it is far from being judicious or advisable. An after-dinner nap is a thing to be avoided—a weak seeking for the pleasant at the expense of the healthful. Indulgence in an after-dinner nap is at the expense of the night's rest. In an ordinary day's life there will be so much mental work, so much bodily (muscular) work, and so much rest from both. If, therefore, we take our rest during the day, there will not exist at night that capability or desire of rest calculated to produce a good night's repose. We may take as an analogy the case of a person who is always eating little scraps at all times. When this person sits down to a regular meal he finds he has no desire for food, no appetite. And why? Because he has frittered away the natural craving in the irregular way alluded to, and when a choice dinner is placed before him he cannot eat a morsel. So with the napper. He allows himself to acquire by degrees (for this habit is not a suddenly-developed one) the trick of closing his eyes after a meal, and of dozing off; he perhaps encourages the habit, but at any rate looks upon it with complacency from its very pleasant nature, and so it grows upon him and becomes a part of his daily existence. I am

aware that some people adopt this mosaic mode of taking their rest, and I was acquainted with a gentleman in the country who took very little rest in bed, rising very early in the morning, and making up his normal amount by sleeping in the daytime, and I am bound in fairness to say that he enjoyed remarkably good health and lived to an advanced age. But he was of a particularly healthy constitution, and was in the open air during the greater part of the day. He took so much bodily exercise in the day that he was always in a state of slight fatigue, and could fall asleep at any time by sitting still in a chair. But many people have not the opportunity of being so much in the open air; their path in life makes them stay indoors during the daytime, and probably chains them to a chair during that period. Such persons should on no account yield to the desire of napping. If necessary and practicable they may relieve their brain action by reading a newspaper or a book, or by conversation, and reserve all sleep for its proper period of night and darkness.

I am aware that the after-dinner nap would by some be hardly called sleep at all, and would rather be designated under the heading of a kind of sub-consciousness, and they would draw an argument from the fact that after-dinner nappers are very easily awakened, and they commonly sleep in fits and starts, dropping off into a short period of slumber, and almost immediately waking up again—a state very different from the sound and heavy repose of the night. And there is no doubt some ground for drawing this distinction between the two kinds of sleep; but they must be taken as being

very similar in character, and that, therefore, the indulgence in the one is eminently calculated to destroy the benefit of the other.

SLEEP-BAITS.

"Join'd to the prattle of the purling rills
Were heard the lowing herds along the vale,
And flocks loud bleating from the distant hills,
And vacant shepherds piping in the dale;
And now and then sweet Philomel would wail,
Or stock-doves 'plain amid the forest deep,
That drowsy rustled to the sighing gale;
And still a coil the grasshopper did keep:
Yet all these sounds yblent inclined all to sleep."

THOMSON.

MOST of the systems and suggestions for attracting sleep depend for success on their monotonous nature The mother soothes her little one by gently singing to it some familiar little ditty which is more remarkable for the tenderness of its pathos than for elaborate composition—and which, simple though it be, under ordinary circumstances very soon produces the wished-for result, and the infant closes its eyelids in slumber. The murmur of a distant brook or the soft sighing of the summer breeze, the clack of the millwheel, the hum of the machine, the ripple on the seashore, the rustling of the leafy trees, the chirp of the grasshopper, the chip of the stonemason, each has a remarkable power of lulling the hearer off to sleep. Soft music has often been employed for the same purpose; and who, with

any soul for melody, would not like to be charmed gently off into slumber by some sweet lullaby?

The noise, however, must not be too familiar, or it will lose its soporific power. "Familiarity breeds contempt," says the proverb, and certainly familiarity with any sound deprives it of its otherwise inherent properties. Thus the clack of the millwheel would suggest sleep to a casual listener, but to the miller it has grown so familiar that he has ceased to take notice of it, and it is a part of his life, whether waking or sleeping. If it stops, however, during his sleep he becomes directly conscious that something novel has happened, and he wakes up. The engineer gets used to his engine, the sailor to the clatter on the deck of his ship, the lighthouse-keeper to the boom of the waves as they thunder against the lighthouse. In each case, to an ordinary person, these sounds would be utterly destructive of repose, but the special persons who are used to them become at last entirely oblivious of their existence until, by ceasing, their absence attracts attention. This principle explains why the monotonous tones of a lecturer often send his hearers to sleep, and how a clergyman, from want of modulating and varying his voice, may exercise more somniferous power than all the drugs in Christendom.

Many systems based on the monotonous principle have been proposed with more or less show of reason. Some have suggested that the would-be sleeper should do little sums of mental arithmetic of a simple character; others that he should continuously repeat a formula or series of words; others, again, that he should, in imagination,

count the revolutions of a wheel continually gyrating upon its axis. All these systems are founded upon the principle that a monotonous exercise has the power of attracting but not exciting the attention, and of making it forget its existence. Perhaps the best and most successful system was propounded some time ago by a Mr. Gardner. He recommended that the head should be laid upon the pillow, and that the person should imagine that he could see his breath enter his mouth, proceed down his windpipe and enter his lungs, and then return and exit through his nostrils; and it was averred that by the time the person had *thoroughly realised* every part of this system he would fall asleep. And no doubt, if every other condition of the somnolent state were fulfilled, he assuredly would; but he must make up his mind to stick honestly to it.

Persons who are very tired do not need these incentives, and can sometimes sleep in spite of great disturbing causes. Thus it is on record that during the attack upon Rangoon, in the Burmese War, the captain of one of the frigates most actively engaged, worn out by the continual mental and bodily tension, fell asleep and remained perfectly unconscious during two hours within a yard of one of his largest guns, which was being worked most energetically the whole time.

Monotony appears to act upon the principle that something is required of just sufficient potency to attract the attention without exciting the nervous system into action. Sleep appears to be impossible as long as the would-be sleeper is conscious of his own will and powers of action, and the moment he loses

all "sight" of these he falls asleep. Reading a dull book is another occupation likely to induce sleep. The reader *who can manage it* finds just sufficient interest in the work to prevent his attention turning in any other direction or entering into other trains of thought, and his brain gradually becomes more and more lethargic until he finally gives way to an overpowering sense of drowsiness and sinks into a regular slumber.

Mr. Pepys describes, in his celebrated "Diary," how he, when hard pressed, used to have a person to read to him to lull him off to sleep. A similar course of action, we read in the Bible, led to the downfall of the wicked Haman and the triumph of Esther and Mordecai and the Jewish religion:—"On that night could not the king sleep, and he commanded to bring the book of records of the chronicles; and they were read before the king." In this case, however, it is open to question whether the king had the chronicles read to him for the purpose of inducing sleep. It may be that he thought his sleeplessness afforded a good opportunity of making himself acquainted with matters which he had hitherto neglected.

In any case the person who desires the approach of sleep must simulate the characteristics of it. He must place himself in the posture which experience has taught to be the most conducive to the purpose; he must breathe slowly, lying perfectly still, and endeavour, as far as possible, to fancy himself dropping off to sleep and becoming unconscious. If this be *steadily persevered in*, and no disturbing causes exist, in all probability sleep will not long be absent.

Perhaps the best and most exhaustive list of sleep-baits is that furnished by Southey in "The Doctor:"—"I put my arms out of bed; I turned the pillow, for the sake of applying a cold surface to my cheek; I stretched my feet into the cold corner; I listened to the river and to the ticking of my watch; I thought of all sleepy sounds and of all soporific things—the flow of water, the humming of bees, the motion of a boat, the waving of a field of corn, the nodding of a mandarin's head on the chimney-piece, a horse in a mill, the opera, Mr. Humdrum's conversations, Mr. Proser's poems, Mr. Laxative's speeches, Mr. Lengthy's sermons; I tried the device of my own childhood, and fancied that the bed rushed with me round and round. At length Morpheus reminded me of Dr. Torpedo's Divinity Lectures, where the voice, the manner, the matter, even the very atmosphere and the streaming candlelight, were all alike somnific: when he who, by strong effort, lifted up his head and forced open the recollectant eyes, never failed to see all around him asleep. Lettuces, cowslip wine, poppy syrup, mandragora, hop pillows, spider's-web pills, and the whole tribe of narcotics, up to bang and black drop, would have failed,—but this was irresistible; and thus, twenty years after date, I found benefit from having attended the course."

There are some kinds of monotony, however, which do not induce sleep—for instance, monotonous occupations such as that of the weaver, who continuously throws the shuttle in exactly the same way and lifts the treadles in, perhaps, exactly the same manner.

There is the stone-sawyer, who sits in the same position and moves his saw through the hard stone all day long without any variation. But then the interest is excited by the hope of gain, the bodily powers are exerted in the hope of increasing the amount of work done, and the nervous system is quickened by the anticipation of the end. Monotony, to be a cause of sleep, must have no interest in profit or loss, success or failure, triumph or collapse; it must be trivial in itself and easy to commence; it must have attraction enough to displace everything else, and yet be of so little interest that it can be thrown aside in a moment without a regret.

BODILY POSTURE DURING SLEEP.

"His arms fall down; sleep sits upon his brow;
His eye is closed; he sleeps, nor dreams of harm.
Wore not his cheek the apple's ruddy glow,
Would you not say he slept on Death's cold arm?"

LONGFELLOW.

A PERSON'S sleep—or, at least, his behaviour during it—is often affected by the position of his body in bed. It is necessary that tho body should be perfectly at ease, and that there should not be any constraint or stoppage or hindering of the circulation. And here, again, each person must find out for himself which and what positions are most conducive to rest—one preferring to lie on his side, another on his back; some with

limbs outstretched, others curled up like a dormouse. But as every one, with slight exceptions, has the same bodily formation and the same organs of secretion and digestion, some general rules may initiate the selection of posture. The right side is, perhaps, the most generally suitable, because the posture of the stomach then enables the food to gravitate more readily into the intestines, and the liver does not press so heavily upon the top of the bowels, as any medical book will tell. One person has a deaf ear, and instinctively reclines upon it, so as to keep the good organ uppermost; another finds relief from thrusting his arm upwards under the pillow; whilst a third, again, finds this position cause cramps and nightmare. Those who are inclined to snore, as is well known, are more prone to do so when lying upon their back, for in that posture their mouth easily falls open, and the air, passing in by the throat, occasions that very unpleasant noise commonly called "driving the pigs to market." Some persons require a high pillow, others scarcely anything under their head. *À priori* one would think that to have the head well raised and the rest of the body to the feet inclined slightly downward was the most promising posture, since it will naturally tend to allow the blood to flow away from the brain. It is a fact worthy of mention that in critical and exhausting diseases the last position is usually on the back, and the change from the back to the side is hailed as a sign of the recovery of strength. The best plan, therefore, is to notice which postures are most comfortable and conducive to repose, and to adopt them in future.



ON BEING CALLED.

"Wherefore rise you now?
It is not for your health, thus to commit
Your weak condition to the raw cold morning."
SHAKSPEARE.

MOST persons find a difficulty in "turning out" of bed in the morning. A young man was asked why he was so long in leaving his couch, and his answer was that he "was hearing two counsel, one of whom was showing why he should remain in bed, while the other was giving reasons for his getting up, and that by the time he had *carefully* heard both sides of the question the clock pointed to twelve (the hour at which he usually made his appearance)." Some people give as a reason for late rising, "I overslept myself." This has led many to have an alarum clock in their bedroom, which could be set at any desired time, and would unfailingly remind them that the hour had arrived. Others leave directions at night with the domestics to arouse them at a particular time in the morning. There is a story told of a certain author who used to tie a rope to one of his wrists so that the policeman might pull it and awaken him at a prearranged time. And an ingenious bedstead was shown at the Great Exhibition of 1851, which by means of clockwork had the

property of turning its occupants rigorously out of bed "to order." The will has a great power over the body. It has been shown that the body possesses a power of moving itself from side to side during sleep without the sleeper being at all aware of the change of position. But the mental powers, though dormant, are not entirely powerless, for it is quite possible for a person to "make up his mind" to wake at a particular time, and to accomplish it without fail. Every one who has gone to bed the night before some pleasant excursion, which necessitated early rising, must have noticed with what curious punctuality they awoke and got out of bed, whilst on another occasion, when they had nothing to make them rise, they slept on till quite late.

And it is surprising how this habit may be cultivated. The chief point is the will. Once *thoroughly* make up your mind, on going to bed, that you will awake at or about a particular time, and you will assuredly do so. The only thing is to impress it vividly on the mind. It is quite possible so to get into the habit of waking at a particular time as to be able to do it under almost any circumstances. If it were not so, how would the labouring men awake? They have no one to call *them*, since they need to start for work before any one else is awake, yet they *do* wake with the utmost regularity, and *that* because they are accustomed to do so. It is not with them a daily effort of will; it has become a matter of habit, and any one who will take the needful pains will soon find that they can do the same without the least inconvenience. Of course sometimes a specially dark morning, or a bad night's rest, or other similar

cause may make a difference, but this is the exception and not the rule. The chief thing is *to make up the mind thoroughly* the night before, and then success is all but certain. On occasions when the person is kept up late at night, and has to start early in the morning, it would, of course, be safer to trust to an alarum. There is another time when the strong will is especially necessary—the getting out of bed on a cold morning. On a warm summer's day, "the moment Aurora peeps into the room," when "the lark carols in the sky," and "the ploughman whistles o'er the lea," it is easy enough to rise betimes; but when the snow is on the ground, and the rude wind blows roughly against the window-pane, when, on putting one's hand out of the bed, the "nipping and eager air" makes a strategic movement of that member imperatively necessary, a considerable amount of determination is needed to leave the warm nest. The best way is to spring out with alacrity, for once *out*, the rest will be easy enough; "ce n'est que le premier pas qui coûte" in this, as in so many other things; dressing will be but a trifle compared with the task of leaving bed. Leigh Hunt has very graphically described the indisposition of a *lie-a-bed* to leave it:—
"On opening my eyes, the first thing that meets them is my own breath rolling forth as if in the open air, like smoke out of a cottage chimney. Think of this symptom! Then I turn my eyes sideways and see the window all frozen over. Think of that! Then the servant comes in. 'It is very cold this morning, is it not?' 'Very cold, sir.' 'Very cold *indeed*, isn't it?' 'Very cold *indeed*, sir.' 'More than usually so, isn't

it, even for this weather?' (Here the servant's wit and good-nature are put to a considerable test, and the inquirer lies on thorns for the answer.) 'Why, sir . . . : I think it *is!*' (Good creature! There is not a better or more truth-telling servant going.) 'I must rise, however—get me some warm water.' Here comes a fine interval between the departure of the servant and the arrival of the hot water, during which, of course, it is of 'no use' to get up. The hot water comes. 'Is it quite hot?' 'Yes, sir.' 'Perhaps too hot for shaving; I must wait a little?' 'No, sir; it will just do!' (There is an over-nice propriety sometimes, an officious zeal of virtue, a little troublesome.) 'Oh, the shirt—you must air my clean shirt; linen gets very damp this weather.' 'Yes, sir.' Here another delicious five minutes. A knock at the door. 'Oh, the shirt—very well. My stockings—I mean, the stockings had better be aired too.' 'Very well, sir.' Here another interval. At length everything is ready, except myself. I now cannot help thinking a *great deal*—who can?—upon the unnecessary and villainous custom of shaving; it is a thing so unmanly (here I nestle closer)—so effeminate (here I recoil from an unlucky step into the colder part of the bed)—no wonder that the Queen of France took part with the rebels against the degenerate King, her husband, who first affronted her smooth visage with a face like her own. The Emperor Julian never showed the luxuriancy of his genius to better advantage than in reviving the flowing beard. Look at Cardinal Bembo's picture—at Michael Angelo's—at Titian's—at Shakspeare's—at Fletcher's—at Spenser's

—at Chaucer's—at Alfred's—at Plato's. I could name a great man for every tick of my watch. Look at the Turks, a grave and otiose people. Think of Haroun-al-Raschid and Bed-ridden Hassan. Think of Wortley Montagu, the worthy son of his mother, a man above the prejudice of his time. Look at the Persian gentlemen, whom one is ashamed of meeting about the suburbs, their dress and appearance are so much finer than our own. Lastly, think of the razor itself—how totally opposed to every sensation of bed—how cold, how edgy, how hard! how utterly different from anything like the warm and circling amplitude which

"sweetly commends itself
Unto our gentle senses."

Add to this benumbed fingers, which may help you to cut yourself, a quivering body, a frozen towel, and an ewer full of ice; and he that says there is nothing to oppose in all this only shows, at any rate, that he has no merit in opposing it."





THE PASSIONS IN RELATION TO SLEEP.

"Before the blazing fire of wood
Erect the rapt musician stood;
And ever and anon he bent
His head upon his instrument,
And seemed to listen, till he caught
Confessions of its secret thought.—
The joy, the triumph, the lament,
The exultation and the pain;
Then, by the magic of his art,
He soothed the throbbings of its heart,
And lulled it into peace again."

LONGFELLOW.

SLEEP is essentially a state of *peace;* it is inconsistent with violent passion of any kind. It is true that to the most distracted and heartbroken a kind of dull stupor may come which bears the outward semblance of slumber, but it has no real identity with the peaceful repose of the infant upon its mother's breast—the type of all true, healthy sleep. It is a stupefying of the faculties, an exhaustion of the overstrained powers, rather than the natural lulling of the life energy which lies dormant for awhile that it may rise again like a giant restored with wine.

Any strong passion, whether of love, grief, avarice, remorse, fear, or hatred, violently agitates the nervous system. The human economy is so beautifully and sym-

pathetically connected, the one part with the other, that when one member suffers all the other members suffer with it. Suspense is a powerful sleep-preventer. Thus Dr. Carpenter says, "It is a common observation that criminals, under sentence of death, sleep badly *so long* as they entertain any hopes of a reprieve; but when once they are satisfied that their death is inevitable they usually sleep more soundly, and this even on the very last night of their lives."

The poet Keats says of a lady whom he passionately admired, that she kept him awake one night "as a tune of Mozart's might do."

Elwes the miser, when worth nearly a million of money, would start from his sleep exclaiming, "My money! my money! You shall not rob me of my money!" In each of these cases the nervous system was strongly excited and urged into action; the nerves stimulated the heart, the heart drove the blood up into the brain, and the brain, thus excited, refused to go to sleep. Of course it is impossible to guard many of the passions, as they are, most of them, involuntary; but in proportion as the mind is diverted from them so will sleep become easy to obtain. Whether it is by amusement, labour, exercise, or what not, the mind should be weaned from them if unable to obtain sleep, for no one can long remain well unless he have sound, regular, and uninterrupted sleep. The passions are so absorbing in their action that everything else is obliterated. Thus a man who is angry cannot eat, drink, sleep, or do anything: his whole being, his every power, seems engrossed in his passion and to be employed in serving it. Even

amongst the lower animals it is found that those which thrive the best are those with quiet, peaceable dispositions; one pig, for instance, is employed in getting angry, while another is getting fat; and every one knows how much nicer a fat pig is than an angry one. The persons who are well, who thrive, and are always happy are generally found to possess minds well balanced, and not liable to be suddenly turned upside down with some flight of ill-temper. The passions can be controlled in a very great degree by those who will take the trouble to do it. The Duke of Wellington had an extremely irritable disposition, yet he so effectually controlled it that few persons ever perceived it. The Quakers are supposed to live long lives because they are peaceable and unswayed by violent passions. Sleep will come easiest to those who imitate it by the repose of their natural dispositions. Like the calm and beautiful lull which always follows the storm, the busy toils of the day will lead on to the gentle repose of the night.

NIGHTCAPS—SPIRITUOUS AND MATERIAL.

"Not poppy nor mandragora
Nor all the drowsy syrups of the world."

MR. BANTING, who is the highest authority upon at least *one* subject, says that a person *may* take a nightcap, whether it be a glass of wine or a little spirits and water. And a great many persons follow his advice, which has the rare and charming quality of being as

welcome as it is wise. The custom of taking something warm before retiring to rest must be attributed to the differing temperatures of the sitting and bed rooms; and in some houses, of which the outside walls are exposed to cold frosts and chilling winds, and where no fires are lit to warm the room, there is great reason for warm nightcaps to assist in getting the body into a warm state before venturing into what seems almost like an icehouse. There must be sufficient warmth in the body to insure a thorough circulation of the blood (although that should be a gentle one), or else the feeling of pain and uneasiness caused by cold limbs or feet will prove sufficient cause to keep the unlucky wight awake for half the night. It is very difficult, particularly to persons of a naturally weak circulation, to get warm after getting into bed with cold feet. On the other hand, some persons find ill effects in the morning from taking spirits at night. Such persons, of course, would be better without stimulants, and, indeed, stimulants for such a purpose, except under medical advice, are better avoided altogether, for their action is but a transient one at the best, and the habitual indulgence in them is hurtful to the system generally. A much better plan is to have a good "warm" at the fire, or by some exercise before going to bed in the winter; or, if that is not sufficient, to have a warm tile. This will make sleeping pleasant, and will leave no deleterious effects in the morning.

Few persons would imagine that a patent had ever been granted to enable any one to wear a nightcap. Agnes Strickland, in her *Lives of the Queens of England*,

says of Queen Mary—"The Queen's gratitude took a very odd form in the case of the Earl of Sussex; he was a valetudinarian, who had a great fear of uncovering his head, and considering the colds he dreaded respected no person, he petitioned Queen Mary for leave to wear his nightcap in her royal presence. The Queen, in her abundant grace, not only gave him leave to wear one, but two nightcaps if he pleased. His patent for this privilege is, perhaps, unique in royal annals:—'Know ye, that we do give to our well-beloved and trusty cousin and counsellor, Henry, Earl of Sussex, Viscount Fitzwalter, and Lord of Egremont and Purnell, licence and pardon to wear his cap, coif, or nightcap, or any two of them, at his pleasure, as well in our presence as in the presence of any other person or persons within this realm, or any other place in our dominions wheresoever, during his life; and these our letters shall be his sufficient warrant in his behalf.' The Queen's seal, with the Garter above it, is affixed to this singular grant." *

Any one who has inspected an old picture or print of a bed scene must have been struck by the curious miller-like effect produced by the nightcapped heads of the sleepers. Of course in olden times builders had not acquired so much exactitude in fitting the doors and windows and other portions of the house, so that frequently, even in what were termed well-constructed houses, there were such cranks and crannies that they let in a perfect deluge of draught—draught "enough to blow your head off." In order to prevent the evil effects of this, and to *keep their heads on*, people were

in the habit of wearing nightcaps, just as they were in the habit of having large curtains to completely inclose their bedsteads.

No doubt the "pates" of the aged who have lost the cover of hair naturally designed to keep warm that portion of the animal economy do require some artificial substitute; and this led to the introduction of nightcaps. But they are calculated to prevent sleep for this reason: during sleep the head requires to be kept cool in order that the brain may be depleted of its blood, and so be in the somnolent state. Any covering, particularly a thick woollen one, would naturally tend to keep the head warm. As much as possible, therefore, avoid nightcaps of this sort; or, if absolutely necessary, select as light a textured one as possible.

BEDCLOTHING.

"Robes loosely flowing, haire as free."

BEN JONSON.

DURING sleep the muscles relax, and the secretory glands of the skin become more energetic than during the day when the active bodily powers brace them up for action. The skin, therefore, gives off very copious exhalations during sleep, and this quality should be borne in mind in the selection of the material for bed-dresses. Persons who perspire very freely ought to change their bed attire frequently, and always see that during the day it is properly and thoroughly dried.

Flannel is a very good substance to have next the skin, because it (from its peculiar surface and constitution) never fits very closely to the body, and consequently never feels clammy even when saturated with moisture, like cotton, linen, or silk. It is of course more difficult to dry, and does not stand washing so well. Some persons always sleep in flannel, and certainly they are little liable to chills in so doing. Others, again, find the surface irritation (particularly in the warm summer months) so distressing that to go to bed in flannel would banish sleep for good. Cotton or linen is generally used for bed-dresses, and in ordinary cases when carefully dried, and when the bedding is in proper condition, and a suitable amount of blanket warmth provided, there can be no objection to either of these materials.

All bedclothing should be very loosely fastened, particularly at the throat and wrists, so that no impediment may be offered to the free circulation of blood, and the necessary supply of oxygen to the lungs. Many horrible dreams and spectral illusions are the result of impeded circulation or air supply. . .

Some persons are in the habit of sleeping in their drawers and stockings, which is a custom to be reprehended, as it leaves no opportunity for drying the moist exhalations of the skin from these articles of attire. Everything should be taken off on getting into bed and hung up loosely, and sufficient bed-clothing put on to keep the body and limbs warm.

The amount of clothing required on the bed is worthy of attention, for it is just as possible to have too much

as to have too little, and *vice versâ;* and, as Professor Lankester has pointed out, the senses are not always the best guides *at the moment* of what it would be judicious to use for a continuance. Thus, on a rather cool night, a person coming in heated with exercise would probably desire to throw off all clothing but a sheet, and afterwards catch cold from want of protecting material; or, on the other hand, by indulging in too much clothing, and keeping the body very warm all night, the sleeper may wake up in the morning languid and unrefreshed. In some climates, where the air is warm and genial, much less precaution need be taken. In England, however, where the temperature rises and falls rapidly, where it may be "spring" on retiring to rest and "winter" when the sleeper awakens, it is necessary to consider how much clothing will be required for a possible change in the temperature during sleep. There can be no doubt that, of all substances, wool is the best to have *next* to the skin. It was designed, by an omniscient Creator, to keep an *animal* warm, and, but for the cleaning and manufacturing, can be used in its natural state by man for the same purpose. It is, in proportion to its warmth, almost the lightest and cheapest material, and it has peculiar properties which are natural to nothing else. It can be manufactured rough like blanket or flannel, or smooth and soft like merino or cashmere. It maintains an equable temperature, and persons are less likely to take cold when they get wet with woollen next to the skin than with anything else. It may seem very strange to a person in the height of summer or winter to

be told that air is a good material to keep one warm, yet still dry air is one of the best non-conductors known. It is for this reason that substances which are composed of fine filaments like wool and silk, and having entangled in their interstices innumerable globules of *still* dry air, are said in winter-time to be "warm." If a large vessel containing air were placed over a lamp, then the circulation of the air would speedily warm the entire bulk; but if the air were all divided up by a non-conducting medium into little compartments, like a honeycomb, so that the air did not circulate, the heat would not come through the vessel at all, or, at any rate, not for a long time. (Fowne.) This explains why felt is so warm, being composed of clotted hair (perhaps the best non-conductor known, being the material in which the animals in the Arctic regions are clothed, in the form of fur); it incloses multitudinous particles of air, which, being kept stationary, form an excellent non-conductor of heat. Thus silk is "warmer," for its weight, than cotton or linen, because its fibres are smaller and more numerous, and divide the inclosed air up into smaller portions.

The inhabitants of cold climates wrap themselves up in the skins of the lower animals in their natural state (after cleaning, &c.), and of course there can be nothing so efficacious for the purpose, combining as they do the maximum of non-conducting power with the minimum of weight. But then furs are expensive to purchase in England, and this quality places them only at the disposal of the rich. They require to be taken great care of, and will wear out at last, like everything mortal.

Another property is needed in bedclothing. Civilisation produces smoke, which, in its turn, has a remarkable propensity for making everything exposed to its influence look black and dirty; this necessitates frequent washings, and woollen is more troublesome to cleanse than linen or cotton. This has led to the introduction of sheets. Now linen and cotton have each different merits. Linen is more durable, stronger, stands washing well, and looks whiter when clean; but, on the other hand, it feels hard to the skin as compared with cotton, and from being of a closer and firmer texture it becomes really colder, as any one may notice on getting into a linen-sheeted bed in the winter. It also fits closer to the skin, and when wet, therefore, feels more *clammy* than cotton. Sheets would be rendered more generally agreeable if some wool could be woven into them, but no sheets of this description appear in the market. On the whole, therefore, cotton appears to be more suitable for sheets, being very easily washed, very white, fairly soft to the touch, cheap to buy, and easy to mend. A fine flannel bed-dress is a capital thing, especially for those who are at all subject to rheumatic affections; it always, even on the coldest night, has a warm feel as compared with other substances.

Many persons of delicate skin find that, by sleeping with the side of their heads on the pillow, their ear becomes sore, or that corns form. Such persons should have one or two thicknesses of merino, or other soft woollen material, wrapped round the pillow, as the springy, yielding nature of wool would afford them great relief.

Many cases of illness, and even fatal illness, have arisen from sleeping in damp beds, particularly to the delicate and the aged. If the bed be suspected of being damp, the best way is to remove the sheets and sleep between the blankets. It is better to do this than to be laid up.

A very nice kind of counterpane was sold some time ago, called Toralium, and appeared to be made of quilted wool. It has the advantages of being very light and very warm.

On the Continent they have a most admirable thing for cold sleepers. It is called a "dûvet," and is made of fine down (hence the name), sewn up quite loosely like a thin bed. It is spread upon the top of the other bedclothes, and is, as may be expected, very light and warm.

We in England are often accused of being "insular" in our tastes and pursuits, and told that we might take a great many lessons from the manners and customs of other peoples. To those in search of examples I commend the following :—

"The inhabitants of Sennaar, a country of Africa, with a view of preserving their skins, though they have a clean shirt every day, sleep with a greased one at night, having no other covering than this. Their bed is a tanned bull's hide, which this constant greasing softens very much. It is also very cool, though it gives a smell to their bodies from which they cannot be freed by any washing." (Rev. J. Platt.)

Paper may seem, at the first blush, to be a very curious substance for a blanket from its stiffness,

tendency to crumple and rustle, and liability to fracture; but in practice, although not equal to woollen for warmth and lightness, it makes a very fair substitute, or addition to it, and it has advantages of its own. It is cheap and very durable when fairly and carefully treated. It is easily folded up, and occupies but a minimum of space when out of use. Being cheap it can easily be replaced when dirty or torn, so that the expense and trouble of periodical washing, mending, &c., is avoided. For persons of limited incomes, to whom "a penny is a penny," it offers great inducements, and no one who has tried a paper "blanket" will complain of want of warmth. Brown paper is preferable, and the coarser it is the better, being strong, durable, and of a colour which keeps "clean" a long while. But ordinary newspapers do very well, and when they have ceased to amuse by what is novel in the shape of crime or scandal, are instantly ready to become the agreeable disseminators of warmth and comfort. The Japanese have shown how much may be made out of paper by the exercise of a little ingenuity, and Europeans will do well to imitate their Asiatic brethren in combining "excellence with economy."

Fine wood-shavings would, in very cold weather, make an excellent dûvet, or counterpane, for the poor. And it seems extraordinary that poor people should complain that they cannot keep warm at night from lack of clothing, when a few yards of calico and some wood-shavings would keep them as warm as a toast!



BEDS.

> "See-saw, Margery Daw,
> Sold her bed and lay upon straw."
>
> NURSERY RHYME.

MR. WHITTAKER, in his history of Manchester, observes that it was universally the practice in the first ages to sleep upon skins of beasts. It was originally the custom of the Greeks and Romans. It was particularly the custom of the ancient Britons before the Roman invasion, and these skins were spread on the floors of the apartments. Afterwards they were changed for loose rushes and leather, and the Welsh a few years ago lay on the former, and many of the Highlanders of Scotland sleep on the latter to this day. In process of time the Romans suggested to the interior Britons the use and the introduction of agriculture supplied them with the means of easily obtaining straw beds. The beds of the Roman gentry at this period were generally filled with feathers, and those of the inns with the soft down of reeds; but for many ages the beds of the Italians had been constantly composed of straw, as it still formed those of the soldiers and officers at a much later period of history, and from both our country learnt their use. It, however, appears to have been taken up only by the gentlemen, as

the common Welsh had their beds thinly stuffed with rushes as late as the conclusion of the twelfth century; and with the gentlemen it continued many ages afterwards. Straw was used, even in the royal chambers of England, as late as the close of the fifteenth century.

Most of the peasants about Manchester lie on chaff at present, as do likewise the poorer class of people in Scotland. In the Highlands heath is also very generally used as bedding even by the gentry, and the repose on a heath bed has been celebrated, by travellers, as a peculiar luxury superior to that yielded by down. In France and Italy straw beds remain general to this day.

But as luxurious habits increased, beds were no longer suffered to rest upon the ground. The better mode, that had anciently prevailed in the East, and had been long introduced into Italy, was adopted in Britain, and they were now mounted on pedestals; this, however, was usually confined to the higher ranks. The bed still continued on the floor among the common people, and the gross custom that had prevailed from the beginning was retained by the lower Britons to the last, and these ground beds were laid along their houses, and formed one common dormitory for all the members of the family. The fashion continued universally among the inferior ranks of the Welsh until a comparatively modern period, and with the uncivilised part of the Highlanders down to our own times. And even in Buxton, within these sixty or seventy years, so very little care was taken to separate the sexes, that the people that repaired to the bath are all said to have

slept in a long chamber together, the upper part being allotted to the ladies, and the lower to the gentlemen, and only partitioned off from each other by a curtain.

"Shall we have mattresses or feather beds?" is the question which agitates many minds, and it is a very large question. On the one hand there are people who will tell you that they have slept all their lives upon feather beds, have enjoyed the most luxurious repose, have lived the healthiest of lives, and have suffered the least of pain, and all upon feather beds; whilst, on the other hand, good persons there are who declare that feather beds readily absorb the perspiration of the body, become charged with moisture from open windows, are very heavy for maid-servants to lift, are very expensive to buy, are constantly in need of being sent to the cleaners to be baked, fresh made up, &c., &c., and that mattresses have none of these defects, are quite soft enough to be healthy, and that the question of warmth and comfort in bed is one of blankets, not of mattresses! "When doctors disagree," who shall decide? Perhaps the better way would be to adopt a middle course, and have mattresses for the summer, and feather beds for the winter. The Duke of Wellington used to have the hardest of mattresses, and the plainest of bedsteads, and used to say that the first turn in bed should be the "turn out." But then he had a knack of almost commanding sleep at any moment, so much so that on one occasion, in the middle of a battle, when quite exhausted with night vigils and day toils, he lay down, took out a newspaper, and, spreading it over him to keep off the sunshine, went off immediately to sleep for an hour.

But then there are persons who do not possess this knack and those physical powers, and they will find something softer and more congenial in a bed. Feather beds are, of course, expensive, and require to be well shaken and made, for nothing is more disagreeable, or more likely to banish "the drowsy god," than reclining upon something which strongly resembles a sack of potatoes. With regard to the question of absorbing the exhalations of the body, or the dampness from the atmosphere, it is difficult to see why feathers should absorb more than wool; they are both animal substances, both were created for the express purpose of preserving their wearers from damp and cold, and neither is *naturally* hygroscopic. In summer particularly, when the sleeper needs to be cool, mattresses of good quality, and well made, are very suitable. Some people, however, find a want of elasticity and softness. A great deal of this may be supplied by having a good spring mattress underneath; these are now made of such admirable quality, and in so many different kinds, that every one may be suited.

"They order," says Tristram Shandy, "these things better in France," and any one who has had the good fortune to sleep on a bed in France must acknowledge that the art above alluded to has not been lost by the effluxion of time. The French palliasses are delightful—at once springy, easy, and healthful. Happily they can be procured, in any number, in England; and no one (who can afford it) has any excuse for being without so desirable an article of furniture. One of the great qualities of a mattress is that it shall readily yield to

the configuration of the body reposing upon it. The body, to be at ease in reclining upon anything, requires this, so as to distribute the pressure over a large portion of its surface. A spring mattress or feather-bed is easy in proportion as it yields to the shape, and distributes the pressure of the weight over a larger surface of bearing. Hair mattresses are sometimes used; they are more elastic and yielding than wool, but are more expensive to purchase, and liable to be attacked by moths. Poor people would find a bed stuffed with wood-shavings not at all a bad one, for the shavings lie very hollow and are very elastic, and when perfectly flattened could be used as fuel, and easily and cheaply replaced.

BEDSTEADS.

"The whitewash'd wall, the nicely sanded floor,
The varnish'd clock that click'd behind the door,
The chest contriv'd a double debt to pay,
A bed by night, a chest of drawers by day."

GOLDSMITH.

MOST people have read this amusing description, but few are anxious to possess such a bedstead; and reasonably so too, for a bedstead which has been used all night ought to stand open all day for health's sake. The common practice is for the bed to be made almost as soon as the late occupant has left it, so as to make the room look neat and tidy; but this is a mode

of proceeding strongly to be condemned. The bed-clothes require aërating to get rid of the insensible perspiration, &c., given off during sleep. Wooden bedsteads have happily quite gone out of fashion, and deservedly so, for however imposing in appearance or correct in theory wood may be for sleeping on, in practice it is attended with the most unforeseen and alarming results. Iron, or, still better, brass, is the best material for bedsteads. Strength, cheapness, portability, and freedom from certain industrious but objectionable insects, are great qualities, and the facility with which these bedsteads can be taken down or put up is astonishing when compared with the business of erecting an old wooden "four-poster." Another great modern improvement is the removal of bed-curtains, hangings, &c., which all tended to prevent free currents of air playing about the sleeper. In ancient days when the sashes were never made to fit, and the doors almost disdained to touch the frames which contained them, and when chimneys were made of such dimensions that men could ascend them, some provision for keeping away a little of the draught was absolutely necessary; but modern skill, which closes almost every orifice capable of admitting air, and reduces those which would take it away, points out that bed-curtains, hangings, &c., may be banished with great advantage both to the health and the comfort of the sleeper. It may here be observed that it is very desirable to have the bedstead as wide as the room will admit of, as the comfort of being able to turn easily, particularly in warm weather, is very great.

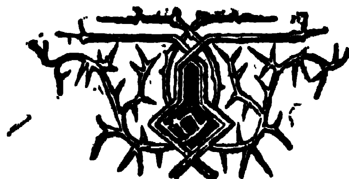
Some persons find great advantage from having the foot of the bedstead lower than the head, and it is quite a natural proceeding, for it tends to draw the blood away from the head, and helps to produce the condition of somnolence.

And here it may not be amiss to give a very graphic description of a German bedroom, extracted from a recent work on home life in that country:—

"Let us next penetrate, so far as may be permissible, into the bedrooms of the family; or, at least, let us take one of them. And here, more especially, will dismay fall upon your insular senses. Where is the mahogany or maple, or the pretty light polished wood, or the delicate enamelled ditto? Where the ample wardrobe, with its long panels of looking-glass, cedar shelves, drawers that slide noiselessly in and out, and various convenient contrivances? . . . . Where are the baths? . . . . But, indeed, to such prudishness has the 'prunes and prisms' programme of propriety reduced the orthodox German lady that she considers it indecent to let a bath be seen in her apartment, where a washhand-basin is only suffered under protest, and does its best to pass unnoticed by shrinking bashfully into the most modest proportions. Side by side stand two little beds. You wonder, as you look at them, how people cast in the heroic mould double up their joints so as to fit into these Liliputian receptacles. You think vaguely that it would not be well to be sick of a fever in such a bed.

"There is a huge wedge or sloping mountain of horsehair at the head of each couch, and on the top of it are two vast pillows, so that lying down seems an

impossibility; and this may account for the shortness of the general contrivances. There will be a good spring mattress, with a horsehair one atop of it; the sheets will not be tucked in; the quilt or coverlet will be scanty in its proportions. To one 'not to the manner born' it is detestable. The result of this will be, if you are abiding within those borders, that you will forthwith send for a carpenter and order a bed according to your dimensions, with blankets and sheets that will tuck in, and a pillow which will not persist in propping you up at an angle of forty-five. The bare necessity (according to the German ideas of necessity) is all that you must hope to find in the sleeping apartments. Frugality, the alpha and omega of German home life, forbids even the tin tacks and the pink lining for which you would fain bargain. 'I can look at myself just as well in a little mirror set upon a chest of drawers as in a fine toilet-glass draped in lace and muslin. No woman's face is more than a foot square, and why should I squander my husband's substance in tin tacks and pink lining?'"





VENTILATION OF BEDROOMS.

"Dependent, huge metropolis! where Art
Her poring thousands stows in breathless rooms,
Midst poisonous smokes, and steams, and rattling looms."

BLOOMFIELD.

THE ventilation of the bedrooms is all-important. As before mentioned, in the good old times (when every-thing was so much better), any amount of air came in and travelled about in the room—in fact, there was so much that all kinds of devices of screens, sandbags, curtains, portières, &c., were employed to stop the influx of cold draughts, but now-a-days *nous avons changé tout cela* and a contrary course must be adopted—air must be encouraged to come into the room.

Any one entering an ordinary bedroom closely shut up, directly the sleeper has left it, will meet with the plainest evidence of the necessity of ventilation. It is not our province to discuss the subject of ventilation, but considerable means of entrance must be found for the admission of fresh and the exit of foul air. It is quite possible by a little judicious management of the entrances and exits to arrange for ventilation without experiencing any disagreeable results from it. If there is a chimney and fireplace to the room (and no healthy

bedroom ought to be without one), it may be made the exit, and it is a good plan to have an Arnott's or other good ventilator fixed, opening into the flue, with a flap of woollen to prevent smoke, &c., from returning down the chimney into the room. Some means of entrance must be found for fresh air too, either by upright tubes (as advocated by Mr. Tobin and others), or in some portion of the room not immediately near the sleeper. If there is a dressing-room contiguous to the bedroom the window can be thrown open in the former, and the air will find its way gradually into the latter. If there is not a fireplace in the room, an upright tube ought to be carried from the room up into the open air, with a flap to prevent down draught.

Many of the lodging-houses at the seaside have very bad bedrooms, particularly at the top of the house where the children sleep—little rooms without fireplaces, and with windows nearly on a level with the bed, thus making the upper portion of the room one mass of stagnant and vitiated air, without means of escape, or opportunity of change, the principle acted on being apparently to provide good sitting-rooms and leave the sleepers to shift for themselves. But when it is remembered that a bedroom is occupied for so many hours more than a sitting-room, the necessity for a plentiful supply of fresh and pure air in the former is abundantly manifested. A bedroom ought to smell as sweet as a sitting-room, and its not doing so is an evidence that it is not so well ventilated. In a sitting-room there is frequent and constant opening and shutting of doors, entrance and exit of persons, &c.;

but in a bedroom, devoted to quiet and repose, the door remains closed, no one enters or exits, and so the air remains stationary. In the modern hospitals air-shafts, for entrance and exit of air, are amply provided; in some, for each bed, thus showing that the subject is deemed an important one. There should, of course, be means of regulating and checking the supply, and of preventing draught, some means of ventilation being provided in every bedroom.

In the *Times*, a short time ago, appeared an article describing a very curious arrangement for sleeping a number of persons with very limited accommodation. It appeared that a railway was suddenly commenced in a remote portion of England which required to be carried on with great rapidity, and large numbers of operatives were soon on the spot to forward the work. After a little while, however, one of them fell ill. This was not thought anything very remarkable; one amongst so many might be expected to suffer; soon, however, the one became two, and the two became four, and at last the illness became so extensive and so alarming that it reached the public press, and an inquiry was instituted, and this revealed a very extraordinary condition of things. It appeared that the work was not considered sufficiently permanent to warrant the erection of proper and sufficient sleeping accommodation, and so was constituted the ingenious device of sleeping what was called "double shifts"—that is to say, like Cox and Box, one man occupied the bed during the day, and another the same bed during the ensuing night! This, of course, left no opportunity

for the proper and necessary aëration and cleansing of the bedding, and hence the alarming disease. The news produced quite a sensation at the time, and the cause having been discovered, the remedy of providing increased accommodation was speedily adopted. It showed very distinctly that certain natural conditions must be complied with if healthy sleep is to be enjoyed. Dr. Lankester says, in speaking of carbonic gas, "This shows us the necessity of getting rid of the carbonic acid gas of our lungs from our houses, from our sitting-rooms, and from our places of assembly; but, above all things, of getting rid of it from our keeping-rooms and sleeping-rooms, *where we spend the larger portion of our time.* I believe there is evidence to show that the want of pure air, and the retention of carbonic acid gas in the air we breathe, are the greatest sources of one of our most terrible and afflicting diseases, and that is consumption. The want of a due supply of fresh air, and the retention of this carbonic acid gas in the house, and the lungs, are the greatest source of this disease. Care should be always taken and the means secured of letting fresh air into rooms and carrying off the heated and poisonous carbonic acid gas."





CHILDREN'S SLEEP.

"We are but little children dear,
Who sigh to find our bedtime near."

L. CARROLL.

"Now, my dears, it is bedtime, so go off with nurse like good children." How often in our childish days have we, in the midst and most interesting period of our plaything time (as we conceived), heard this awful summons to leave the realms of pleasure and go to the nasty cold tub and irritating process of being undressed and put to bed!

Children instinctively dislike going to bed. When in bed, and particularly when the time comes for getting up, they are quite contented; the *premier pas qui coûte* is the packing up, leaving the playthings, &c., and having their clothes removed.

Children require very delicate management at all times, but at none more than at the time devoted to sleep, for sometimes from a want of tact or loss of temper on the part of the nurse, from the neglect of appropriate means to get the child into the state most calculated to insure sleep, the poor little things become irritated, cross, and fretful, and quite unable to go to sleep at all.

In the first place, do not argue with children; they

are incapable of appreciating the nature of an argument, and can only be made to understand it when it is put into the form of a threat or a bribe, both of which should be carefully avoided as much as possible, as a threat lays the foundation for future obstinacy; and a bribe, from its nature, will need to be constantly increased if it is to continue to possess any efficacy.

Children must be taught (in the most gentle and affectionate manner possible) that sleep is necessary for them, and that when bedtime comes they must go off *at once.*

Many parents make a great mistake in this first proceeding by indulging the whims of their children. Poor little things, they feel as sleepy as can be, and can hardly keep open their eyes, and yet they protest that they are wide awake, and don't want to go to bed for an hour! Do not irritate the child by losing your temper, or by cross and sharp words, by snatching it up, or slapping the little one, because if you do you will have a scene now, and make it ten times worse to-morrow night. Children have quick eyes (even at bed-time), and very soon discover the weak points of those about them, and if you give way to temper or irritability, they will (such is human nature) take a kind of instinctive pleasure, directly they are at bay, in touching up the holes in your armour. Always treat them gently and as patiently as you can. Do not be in a hurry, but at the same time always be firm, and carry out your carefully-thought-over intentions. Lay down a plan of routine, and adhere to it as carefully, and make every one else adhere to it as closely as possible. Modifications must

occasionally be made, but when children know they will *have* to go at a certain hour, and that nothing they can say or do will alter it, they will grow into obedience, and you will afterwards have but little trouble with them on that score.

Another great point is to get those children who are capable of it moderately tired with bodily exercise, and here, of course, much depends upon their age and physical constitution. The newly-born child sleeps well *without* exercise, having little muscular power to exert, but with increasing muscular power comes the capacity and need for exercise, some children requiring but a little walking in the open air, others needing a regular romp. This latter proceeding had better not take place exactly as they go to bed, but some time during the evening—a little child's dance, a safe rocking-horse, skipping-rope—no matter what so long as the effect is to induce a moderate degree of fatigue, for nothing than this is more likely to bring the child into a state favourable to sleeping. Open-air exercise is, of course, the best of all, and if the neck, arms, and legs, &c., are properly protected, and a careful grown-up person is in charge of them, healthy children may take a great deal of outdoor exercise with a certainty of obtaining long and refreshing slumber—one will follow the other as naturally as the day the night. But in any case see that exercise be given—not over-fatigue, for that will prevent sleep, but moderate exercise, which will insure it.

Avoid cold bathing at night as much as possible (except in summer perhaps, when a cold sponging over may be pleasant and soothing), because it is a great

trial to the child's nerves (already half asleep) to have to stand still and have the cold water splashed about and the skin rubbed dry with warm towels. Nearly all children object to this process at night when sleepy and tired, and the shock mostly has the effect of rousing them up rather than soothing them to sleep. Of course I know it is desirable to clear away all the exhalations from the epidermis, and leave the pores open; but if the skin is thoroughly cleansed once a day with warm water and soap in the morning, after the more copious nocturnal exhalations are exuded, and in a comfortable apartment, the water will be not only beneficial, but agreeable as well.

When children are in bed always insist upon their going to sleep, or at least trying to do so, and do not tolerate anything like romping and noise. Let them have all the exercise before, and when once in bed let them be still and quiet. I was taken into a nursery the other day to see the children in bed. I imagined I should find them quietly lying down half-dozing off, they having retired to rest (!) some time before. But imagine my surprise at finding them standing up in their cots as lively as crickets, and with faces full of arch roguery and up to any mischief. The bed-clothes were scattered hither and thither, partly on the floor, and their throats and arms were bare. The attempt to lay them down resulted in their springing up again, and shouting out with childish glee, "Me no want go to sleep"—an expression which carried conviction in its tones at once, and pointed a very good moral on the management of the children's sleep-time.

The chief point with children (as with adults) lies in the getting off to sleep, and once fairly asleep everything goes on all well. When there is much difficulty it is a good plan to sing or hum to them in a low tone; for anything of a monotonous character, as has been before observed, has the power of soothing off to sleep. The room should be made and kept as dark as possible, and great care should be taken that the slumberers are not disturbed. Children are apt to wake up sometimes suddenly. As a remedy for this, some one should always be within hearing, although not within sight, of the slumberers, to be ready at once to soothe the children when they awake in a fright.

Some children cannot go to sleep without the nurse is with them, others want a light burnt; but a little management will sometimes get them out of these habits, or at any rate greatly modify them. Always see that the nurse is careful not to frighten the children in any way, either to make them still or go to sleep. I say this because a relative of mine had a girl as nurse who was in the habit of threatening (and in one case, I believe, of beginning, to put the child up the chimney if she were not quiet. Of course this was not found out until the girl was going away, when the child, who had been all the while afraid of her, let the secret out, and the wicked girl confessed to it! Many a tender infant has in this way received a fright which remains with them a long time, and perhaps throughout life, and parents cannot be too much on their guard against so pernicious a practice. Always repose confidence in your servants, but keep your eyes

open, and take good care that they merit your confidence.

Little children have very tender skins, and are very sensitive to sudden changes of heat and cold. Thus in winter it is a bad plan to put them suddenly into an icy bed; when they are sleepy this shock will probably wake them up and send the blood circulating through their bodies more vigorously than ever at a time when the heart action should be slackening for repose. It is, of course, a bad plan to get children into a hothouse state of existence by keeping them always warmed up in the winter, but at the same time anything like sudden shocks of different temperatures ought to be avoided. For this reason it is better to have their beds warmed in the winter-time so that they may not experience any difficulty on this score. Let them be properly clad, of course, as well, under medical advice, using flannel as being safer in changes of temperature. Children often uncover themselves, particularly when not sleepy, and have not the sense to replace the sheet, &c. Many sore throats and colds are due to this cause.

Great care should be taken that the cots are of such a construction as to prevent the occupants falling out on to the ground. Some are made as adjuncts to a bed—that is, they have three sides, or rather top, bottom, and only one side. This kind is especially liable to cause this danger, and should be firmly secured to the adjacent bedstead in some way to prevent the catastrophe. Those with high sides are, of course, free from this objection. The sides ought to

be quite perforated—even coarse netting is desirable—to allow of the atmosphere of the bedroom freely passing. Make the air of the room of a proper temperature, avoiding draughts, and then let the children have the benefit of it.

Children should be awakened from sleep as gently as possible, either by tickling them softly or rubbing their hands, so as to allow of the gradual return of sense to their limbs, nerves, and brain; for any sudden noise, by acting upon the aural nerves first, will probably give them a sudden start and frighten them. Children are generally a little apt to be querulous when first awakened, and they will be sure so to be if that operation be a startling one. When you wash them in the morning, always have everything—bath, coarse towels, &c., &c.—all quite ready before you awaken them, so that directly they awake they may have something to divert their minds and claim their attention.

And a word as to precocious children. Some children have very quick abilities and very active brains. Learning which to ordinary children is a task is to them a pleasure; they rush to a book, or music, or drawing, with eagerness. At first this is greatly admired, until it begins to be noticed that the child is restless at night and cannot sleep. Everything is tried, and yet no repose obtained. The child's brain has been allowed to overwork itself, and if permitted will do itself permanent injury. It is of no use to forbid the child the use of books, &c., for then the poor little thing will feel miserable. A thorough change of abode and occupation must be resorted to; bodily work must be

substituted for mental; and the irritated brain, which is the cause of the sleeplessness, will regain its natural and healthy condition.

DREAMS.

"He knew the seat of Paradise,
Could tell in what degree it lies;
And, as he was disposed, could prove it
Below the moon or else above it:
What Adam dream'd of when his bride
Came from her closet in his side."

BUTLER.

OF all the extraordinary rubbish that has ever been written, that about the meanings of dreams appears to be the most ridiculous. From the merest germs of thought and slightest types of nightly fancy there have been built up the most absurd superstructures of invention that could mislead the simple or poison the weak-minded! Dr. Mackay observes most truly:—"In many parts of Great Britain, and the continents of Europe and America, there are to be found elderly women in the villages and country places whose interpretations of dreams are looked upon with as much reverence as if they were oracles. In districts remote from towns it is not uncommon to find the members of a family regularly every morning narrating their dreams at the breakfast-table, and becoming happy or miserable for the day according to their interpretation."

The only warrant for supernatural dreams is derived from the miraculous ones recorded in the Bible; but as miracles ceased with the dispensation which included them, so there is not the slightest reason to be found anywhere for considering dreams as more supernatural or prophetic than any other human phenomena.

The initiation of dreams can nearly always be traced to two sources—one—some functional derangement in the interior of the body, and the other—some external impact on one or other of the senses during the sub-consciousness of incomplete sleep.

Lord Brougham was of opinion that, however long a period or complicated a transaction may be represented to the mind in a dream, it really all occurs instantaneously. Just as the lightning illumines a whole landscape as far as the eye can reach, and includes every variety of natural scenery and motion, so the dream cause, whatever it be, flashes the whole subject across the mind with all the vividness of reality. Persons who have been saved from death by drowning have related that in *one moment* all the events and transactions of their lives have passed before them under the influence of the awful fear of losing their life; and this explains how, under the influence of some exciting cause, a whole train of circumstances or course of actions can be conjured up before the mind in the like brief period. In the anecdote of the traveller by the five o'clock coach the whole series of "small watches, big watches, clocks, and Old Time" himself, were, without doubt, *produced* by the Boots hammering at the door of his bedroom and shouting out, "Past vore o'clock!"

A noise in an adjoining apartment to a nervous person will instantly produce on his mental retina a fearful picture of an unguarded house, an open window, or what not, through which several men with blackened faces, each armed with pistols and swords, enter and march straight up to him, demanding all the plate and money in the house! Or the cause may arise from indigestion or derangement of the liver. Sydney Smith says very truly:—

"The longer I live the more I am convinced that the apothecary is of more importance than Seneca, and that half the unhappiness in the world proceeds from little stoppages, from food pressing in the wrong place, from a vexed duodenum, or an agitated pylorus. The deception, as practised upon human creatures, is curious and entertaining. My friend sups late; he eats some strong soup, then a lobster, then some tart, and he dilutes these esculent varieties with wine. The next day I call upon him. He is going to sell his house in London and to retire into the country. He is alarmed for his eldest daughter's health. His expenses are hourly increasing; and nothing but a timely retreat can save him from ruin. And all this is lobster; and when over-excited nature has had time to manage this testaceous incumbrance the daughter recovers, the finances are in good order, and every rural idea effectively excluded from the mind. In the same manner old friendships are destroyed by toasted cheese, and hard salted meat has led to suicide."

And here I will relate a small dream which occurred to myself. One night, many years ago, I had partaken

of rather a large quantity of cold pastry at a late hour, and shortly after retiring to rest I became conscious (as I thought) of *a large tree* lying straight across my body. Unable to move it, and feeling the awful weight, I called out aloud, and the door being ajar, a relative in another apartment asked me "what was the matter," and I replied (for I was quite sensible of the question and of my being in bed) that "a great tree was lying across me, and would they come and take it away?" I was told that I was in bed, and that there was no tree, and presently I became sensible enough to know that I had been dreaming. I have in my eye *now* the whole circumstance—the tree, and my calling out—and have not the slightest doubt now of the tree being composed of *cold pastry*.

Doctors say that dreams only happen during *imperfect* sleep, and that persons who sleep well, and soundly, seldom or never have them. And it is when a person is half-asleep that the senses are partially susceptible to outer influences; thus it happens that causes from without produce dreams from within. "We suffer," says Addison, "as much from trifling accidents as from real evils. I have known the shooting of a star spoil a night's rest." "A general who led an army with credit has been known to feel alarmed at a winding-sheet in the candle; and learned men, who had honourably and fairly earned the highest honours of literature, have been seen to gather their little ones around them, and fear that one would be snatched away, because

> "When stole upon the time the dead of night,
> And heavy sleep had closed up mortal eyes,
> A dog in the street was howling at the moon."
>
> DR. MACKAY.

Nightmare is another form of unpleasant dreaming, and arises chiefly from taking indigestible food late at night, &c. "Mrs. Radcliffe, for the purpose of filling her sleep with those phantoms of horror which she has so forcibly embodied in the *Mysteries of Udolpho* and the *Romance of the Forest*, is said to have supped upon the most indigestible substances; while Dryden and Fuseli, with the opposite view of obtaining splendid dreams, are reported to have eaten raw flesh." (Macnish.) Of course a great deal depends upon a person's temperament; thus some people never seem to dream, or, at any rate, are unable in the morning to recount their nocturnal experiences, whilst others dream almost every night of their life, and scarcely think themselves in good health if they omit to do so. To such persons perhaps the force of habit and the power of association lend their assistance; for it is curious how, by the power of association, a particular series of thoughts is intimately connected, or suggested, by a particular thing or state; and the process of going to sleep may be so associated with dreaming, that the one follows the other as the shadow follows the substance. Many dreams are exceedingly pleasant, and are parted from with regret, as most people have experienced; and some, when broken by slumber, are renewed by the renewal of it. Many curious tales are related of trains of reasoning, of difficult problems of arithmetic solved, of complicated processes of manufacture worked out, &c. One of the most curious was the production of the sonata by Tartini, called the Devil's Sonata; and the history runs somewhat as

follows:—One night, Tartini having in vain endeavoured to compose a sonata, and having tried every method and employed every kind of device known to his skill, at last gave up the task as hopeless and retired to rest; no sooner had he fallen asleep, however, than he thought he saw the Devil approach, take up his violin, and play one of the most enchanting pieces of music that mortal ears had ever listened to. Tartini in vain implored him to write it down and give it to him, but the Devil was obdurate, and refused. When Tartini awoke he rushed to his desk and put down on paper all that he could recollect of his dream (which he averred was but the worst portion), and the sonata has ever since gone by the name of the Devil's Sonata. No doubt in this case Tartini had gone to rest with his mind strongly excited by music, and some theme of more than usual beauty having occurred to him in the dream, his excited brain conjured up the origin of it as supernatural. Tartini's experience has not been repeated, either in his own case or in that of others; and, indeed, dreams are of so ungovernable a character that even if they were to come periodically they would be of but little use for that very reason.

There is another form of dreams which some people consider as supernatural—namely, when they have dreamt that some calamity or accident has happened to some friend, and it really did so happen.* They

* Sir Walter Scott very truly says, "Considering the many thousands of dreams which must night after night pass through the imagination of individuals, the number of coincidences between the vision and real event is fewer and less remarkable than a fair calculation of chances would warrant us to expect."

call such dreams presentiments. Now it must always be recollected that the human mind has an affinity for seizing upon favourable coincidences, and of forgetting such as are contradictory to this principle. Thus, if one dream came true in twenty cases, and the other nineteen did not do so, they would attach more importance to that which agreed with their preconceived views than to the other nineteen altogether—not so much from a wilful desire to misrepresent the actual state of affairs as from a feeling that the apparent divergence arose from their want of ability to trace the connections. Thus a person meeting a friend says, "I had a presentiment that I should see you, for I dreamed about you last night." Now if that person had not met his friend he would soon have ceased to think of the dream as remarkable, but directly the friend appears all the dream and its phenomena are brought vividly to mind, and looked upon as being supernaturally connected together. And this is not the only thing, for some persons go further, and argue from this that because they have dreamed something about some friend (perhaps the mother about her child, or the wife about her husband) they begin to call to mind all the evils that can, by any possibility, happen to the object of their affections. It is absurd to suppose that the perceptive faculties, which are duller and weaker during sleep than at any other time, can at the same moment be endued with an increased energy of discovery, or that the night period, when everything else is still and tranquil, is the only time when intelligence of good or evil can be transmitted. The power of dreaming

tends to show that some of the powers of the mind may be active while the body is at rest—that is, *if* dreams are a mental phenomenon at all. At first sight, as there does not seem to be any power of governing or directing these nocturnal impressions, nor any mode by which the will can act upon them, as it can and does act upon every other kind of mental procedure, dreams appear to be like impressions produced upon the nervous system rather than like trains of reasoning within the brain—to resemble the description of an action in a book, or on a painted canvas, as compared with the realities of actual life. Added to which, the space of time wherein the most elaborate dreams take place does not leave room for any of the usual processes by which the human mind deduces argument from premises, or draws conclusions from facts. Like the power of moving about, which the limbs exert during sleep, independently of the mind, dreams come and go in rapid succession, produce the most complicated and gorgeous of panoramas, the most startling of actions, or the most fearful of catastrophes, and yet all the while the person has not exerted the smallest particle of brain power, or evinced, in connection with them, the slightest trace of will.

Dr. Macnish, in his *Philosophy of Sleep*, has carefully studied the nature of dreams, and lays down a very rational theory on the subject:—"I believe that dreams are uniformly the resuscitation or re-embodiment of thoughts which have formerly, in some shape or other, occupied the mind. They are old ideas revived, either in an entire state, or heterogeneously mingled together.

I doubt if it be possible for a person to have, in a dream, any idea whose elements did not, in some form, strike him at a previous period. If these break loose from their connecting chain, and become jumbled together incoherently, as is often the case, they give rise to absurd combinations; but the elements still subsist, and only manifest themselves in a new and unconnected shape. As this is an important point, and one which has never been properly insisted upon, I shall illustrate it by an example:—

"I lately dreamed that I walked upon the banks of the great canal in the neighbourhood of Glasgow. On the side opposite to that on which I was, and within a few feet of the water, stood the splendid portico of the Royal Exchange. A gentleman, whom I knew, was standing upon one of the steps, and we spoke to each other. I then lifted a large stone and poised it in my hand, when he said that he was certain I could not throw it to a certain spot which he pointed out. I made the attempt, and fell short of the mark. At this moment a well-known friend came up, whom I knew to excel at *putting* the stone; but, strange to say, he had lost both his legs, and walked upon wooden substitutes. This struck me as exceedingly curious; for my impression was that he had only lost one leg, and had but a single wooden one. At my desire he took up the stone, and without difficulty threw it beyond the point indicated by the gentleman upon the opposite side of the canal. The absurdity of this dream is extremely glaring; and yet, on strictly analysing it, I find it to be composed of ideas which passed through my mind

on the previous day, assuming a new and ridiculous arrangement. I can compare it to nothing but to cross readings in the newspapers, or to that well-known amusement which consists in putting a number of sentences, each written on a separate piece of paper, into a hat, shaking the whole, then taking them out one by one as they come, and seeing what kind of medley the heterogeneous compound will make when thus fortuitously put together. For instance, I had, on the above day, taken a walk to the canal along with a friend. On returning from it, I pointed out to him a spot where a new road was forming, and where, a few days before, one of the workmen had been overwhelmed by a quantity of rubbish falling upon him, which fairly chopped off one of his legs, and so much damaged the other that it was feared amputation would be necessary. Near this very spot there is a park, in which about a month previously I practised throwing the stone. On passing the Exchange on my way home, I expressed regret at the lowness of its situation, and remarked what a fine effect the portico would have were it placed upon a more elevated ground. Such were the previous circumstances, and let us see how they bear upon the dream. In the first place, the canal appeared before me. 2. Its situation is an elevated one. 3. The portico of the Exchange, occurring to my mind as being placed too low, became associated with the elevation of the canal, and I placed it close by on a similar altitude. 4. The gentleman I had been walking with was the same whom, in the dream, I saw standing upon the steps of the portico. 5. Having related to him the story of

the man who lost one limb, and had a chance of losing another, the idea brings before me a friend with a brace of wooden legs, who, moreover, appears in connection with putting the stone, as I knew him to excel at that exercise. There is one other element in the dream which the preceding events will not account for, and that is, the surprise at the individual referred to having more than one wooden leg. But why should he have even one, seeing that, in reality, he is limbed like other people? This also I can account for. Some years ago he slightly injured his knee while leaping a ditch, and I remember jocularly advising him to get it cut off. I am particular in illustrating this point with regard to dreams, for I hold that, if it were possible to analyse them all, they would invariably be found to stand in the same relation to the waking state as the above specimen. The more diversified and incongruous the character of a dream, and the more remote from the period of its occurrence the circumstances which suggest it, the more difficult does its analysis become; and, in point of fact, this process may be impossible, so totally are the elements of the dream often dissevered from their original source, and so ludicrously huddled together."





SOMNAMBULISM.

"No resting could he finde at all;
No ease, nor heart's contente;
No house, nor home, nor biding place,
But wand'ring forth he went."

THE WANDERING JEW.

FEW things are more startling than to meet a somnambulist, and few people would care to do so in the dead of the night. Yet in hospitals cases do sometimes occur in the present day of persons given to this peculiarity wandering about the wards perfectly asleep and unconscious. A hospital sister once told me that one night she awoke in bed and found a figure in white standing at her bedside. She was greatly alarmed for an instant until she discovered that the woman had her eyes shut, and, on inquiry, turned out to be an unsuspected somnambulist. And cases are mentioned in the daily journals which are amply authenticated, so as to leave no doubt as to their genuineness. Somnambulism appears to be one of those transactions in which the limbs exert their functions involuntarily, or at least the brain directs their motions while it is only in a state of semi-consciousness.* Sleep-walkers avoid

* Thus it is well authenticated that several of Sir John Moore's soldiers fell asleep whilst on their march, and still kept on marching with their comrades. (Macnish.)

obstacles, open and shut doors, go down and up stairs, carry things about safely, deposit them carefully, &c., &c., which seems at first blush to indicate that they exercise perception and reasoning; but there is a power called force of habit which is very strongly developed. Thus in a modern comedy, which had an unexampled duration of existence, one of the characters, a retired cheesemonger, when in a drawing-room, quite unconsciously puts his handkerchief on like an apron, from mere force of habit, and without thinking about it. A person, then, having from force of habit been accustomed to walk a certain number of steps up to a door, then to open it and walk down so many steps, would be able to do this without any mental exertion at all; and here I will relate a case of my own. When I was about seven years of age, one night, as I lay asleep, I thought I heard some one ask me to bring him an egg from an adjoining apartment where a case of them had been recently temporarily deposited. I stepped out of bed, went to the chest, took out an egg and carried it down a flight of steps, left it there, and returned to bed (all the while being asleep), and in the morning, when the subject was talked about, all I could recollect was that I had heard the egg asked for. There could not be the least doubt, because "there was the egg." Of course in this instance I was so used to the stairs that I went down and up them by force of habit.

Somnambulists cannot have the use of their perceptive senses, since they frequently place themselves in situations of imminent peril, which they always carefully avoid when truly awake. They sometimes walk along

the top parapet of a lofty house, or reach out of a window, being every moment in the most horrible danger, and yet they do not exhibit any indication of disturbance or any desire to avoid the dangerous place. This shows clearly that the state of somnambulism is diametrically opposed to that of ordinary and natural walking or being, and goes to prove that, as the mind is engaged in the latter state, it must be unengaged in the former. No one appears to have satisfactorily explained the sources from which this disagreeable propensity flows, most of the authorities alleging that it proceeds from a disordered state of health—a solution which accords very much with daily observation. Certainly persons who are subject to it can generally foretell when it is likely to commence, and that from the state of their health.

Professor Fischer, of Basel, relates that when he was a boy, at a seminary in Wurtemburg, a student from a superior college came once on a visit to the school. This person, who was strong and hardy, and appeared anything but nervous, was on his way home, whither he was sent to be cured of sleep-walking. He was in the habit of walking in his sleep every evening at ten o'clock, half-an-hour previous to which he used to experience an irresistible tendency to sleep, and was obliged to go to bed. Whilst on this visit the boys of the seminary used to assemble at his bedside every evening at ten o'clock to watch his proceedings, and exactly at that hour he used to commence by uttering a few unconnected sentences, but he passed into the second stage of somnambulism almost immediately, and

jumped out of bed. The scene of action was a large, broad saloon, containing sixty beds, placed in four rows. He generally remained standing for a few seconds motionless, as if considering what to do, and would then suddenly make for the door or window and endeavour to escape, or not unfrequently, if teased, commenced chasing the boys. He would run up and down the saloon, and between the rows of beds in all directions, with amazing swiftness, followed by the sixty boys, and then commenced a scene of shouting, laughing, teasing, and bolstering, during the whole of which the somnambulist acted as if he saw and heard everything, always avoiding every obstacle with the greatest dexterity. The professor says he remembers remarking that he always went with his fingers spread out before him. Sometimes the boys got him into a corner and thought to secure him, but he always eluded them by his superior dexterity, jumping over the beds or dodging between them. Occasionally he contrived to escape at the door, in which case he generally ran along a passage to his sitting-room, where he rested himself, and not unfrequently took down a book and commenced reading, either in a low tone or aloud. His eyes were alternately shut and open, but when the latter they were convulsively turned upwards, showing nothing but the whites, so that he could not have seen with them. One experiment which was tried upon this remarkable somnambulist was followed by a remarkable effect. Imagining that it was by means of his finger-tips that he saw his way, the boys, one night during the sound sleep which preceded his sleep-walking, fastened

a pair of gloves on his hands, and stockings on his feet. At the usual time he jumped out of bed, but, in spite of their teasing him, he remained on the spot, and commenced groping and feeling like a blind person. At last he seemed to discover what was the matter, and tore off the gloves in pieces, and threw them on the ground. The professor does not remember whether he pulled off his stockings also; however, immediately after freeing his hands, he commenced his usual wild career about the room.*

Dr. Abercrombie mentions a curious case:—"This woman was very much addicted to talking in her sleep; and after some observation it was discovered that in doing so she went over all the transactions of the preceding day—everything, especially what she had herself said, was distinctly repeated in the order in which she had spoken it. In general, she commenced immediately after she had fallen asleep, and began by repeating the first words she had spoken in the morning, and then went through the other conversation of the day, adapting her tone to the real occurrences. Thus, whether she had called aloud at a distance, or whispered something which she did not wish to be overheard, whether she had laughed or sung, everything was repeated in the order and in the tone of voice in which it had actually occurred. In repeating conversations with others, she regularly left intervals in her discourse corresponding to the period when the other party was supposed to be replying, and she also left intervals between different conversations, shorter in reality, but

* Fischer's *Somnambulismus*, 1839, p. 74.

corresponding in relative length to the intervals which had in fact taken place. Thus if she had been for two hours without conversing with any other person, the interval in her nocturnal conversation was about ten minutes. In this manner she generally required about two hours to rehearse the occurrences of the day."

SPECTRAL ILLUSIONS.

"I have heard (but not believed) the spirits of the dead
May walk again."

WINTER'S TALE.

THERE were formerly many, and there are still a few people, who believe in ghostly apparitions, which, when inquired into carefully, generally present a slight substratum of reality. There is some white object dimly seen in the twilight, or some accidental beam of moonlight in a dusky chamber, which, to a fanciful beholder, appears to be a spectral visitant. Thus in India they have a banshee which appears to foretell some calamity, and Sir Walter Scott mentions similar cases in his *Demonology*. Many things of this kind may be traced to some latent disorder of the brain, a kind of slight hallucination bordering on derangement. Such is the case of Nicolai, the Prussian bookseller, mentioned in *Nicholson's Journal*, vol. vi., page 161 et seq., et vol. xv., page 238 et seq. And Dr. Macnish relates an excellent example:—

"In March, 1829, during an attack of fever, accom-

panied with violent action in the brain, I experienced illusions of a very peculiar kind. They did not appear except when the eyes were shut, or the room perfectly dark; and this was one of the most distressing things connected with my illness, for it obliged me either to keep my eyes open or to admit more light into the chamber than they could well tolerate. I had the consciousness of shining and hideous faces grinning at me in the midst of profound darkness, from which they glared forth in horrid and diabolical relief. They were never stationary, but kept moving in the gloomy background; sometimes they approached within an inch or two of my face; at other times they receded several feet or yards from it. They would frequently break into fragments, which, after floating about, would unite—portions of one face coalescing with those of another, and thus forming still more uncouth and abominable images. The only way I could get rid of these phantoms was by admitting more light into the chamber and opening the eyes, when they instantly vanished, but only to reappear when the room was darkened or the eyes closed. One night, when the fever was at its height, I had a splendid vision of a theatre, in the arena of which Ducrow, the celebrated equestrian, was performing. On this occasion I had no consciousness of a dark background like to that on which the monstrous images floated, but everything was gay, bright, and beautiful. I was broad awake, my eyes were closed, and yet I saw, with perfect distinctness, the whole scene going on in the theatre—Ducrow performing his wonders of horsemanship, and the assembled multitude,

among whom I recognised several intimate friends—in short, the whole process of the entertainment as clearly as if I were present at it. When I opened my eyes the whole scene vanished like the enchanted palace of the necromancer; but when I closed them it as distinctly returned. But though I could thus dissipate the spectacle I found it impossible to get rid of the accompanying music. This was the grand march in the opera of *Aladdin*, and was performed by the orchestra with more superb and imposing effect, and with greater loudness, than I ever heard it before; it was executed, indeed, with tremendous energy. This air I tried every effort to dissipate by forcibly endeavouring to call other tunes to mind, but it was in vain. However completely the vision might be dispelled, the music remained in spite of every effort to banish it. During the whole of this singular state I was perfectly aware of the illusiveness of my feelings, and though labouring under violent headache could not help speculating upon them, and endeavouring to trace them to their proper cause. This theatrical vision continued for about five hours; the previous delusions for a couple of days." *

Professor Fischer, of Basel, relates the case of a lady of a melancholic temperament, who, from living in the bustle of a town, was suddenly removed, in consequence of marrying a country clergyman, to a small village in France, where she led a dull and miserable life. After residing here for several weeks the following occurrence took place:—She went to the kitchen to bring up a dish whilst her husband and a guest were at dinner,

* *Philosophy of Sleep*, p. 274, 3rd edition.

and on approaching the dining-room she beheld an apparition of *herself* on the opposite staircase, in exactly the same attitude, and with the same dish in its hand! She received such a fright from this startling appearance that she immediately let fall the dish she was carrying and fainted away. On another occasion she went upstairs to fetch a particular dress, in which she was going out driving, and on reaching her chamber again saw herself, standing before the clothes-closet, and in the identical dress she was going for. At first the apparitions were followed, on each occasion, by a severe illness; but at last, as they became more frequent, she grew quite indifferent to them, and on seeing this double of herself would merely exclaim, "Ha! are you there again?" Her medical attendant advised her to remove from the place and engage in lively pursuits, which she did. In a year's time she returned quite cured, and lived in the same house for a quarter of a year, before removing to a new one, without any repetition of her former illusions.

The belief in these things is not confined to persons of ordinary or even weak intellect, for we find the illustrious Mary Somerville—who has, perhaps, done more than any other woman to prove woman's intellectual capacity for the higher branches of knowledge—suffered from these fears in her childhood. "I was very fond of ghost and witch stories, both of which were believed in by most of the common people and many of the better educated. I heard an old naval officer say that he never opened his eyes after he was in bed. I asked him why, and he replied, 'For fear I

should see something.' Now I did not actually believe in either witches or ghosts, but yet, when alone in the dead of the night, I have been seized with a dread of I know not what. Few people will now understand me if I say I was *eerie*, a Scotch expression for superstitious awe." Dr. Rogers says, "Spectres have not altogether left the scene, and although those apparitions which do appear are generally detected, and found to possess flesh and blood, they testify to a general prevalence, a terror of, and faith in, ghostly visitations among the people."

Horace Walpole relates the following remarkable story, originally given by Lord Ashburnham:—During the hot weather "his lordship's very old uncle, the Bishop of Chichester, was waked in his palace at four o'clock in the morning by his bedchamber door being opened, when a female figure, all in white, entered and sat down near him. The prelate, who protested he was not frightened, said in a tone of authority, but not with the usual triple adjuration, 'Who are you?' Not a word of reply; but the personage heaved a profound sigh. The bishop rang the bell, but the servants were so sound asleep that nobody heard him. He repeated his question; still no answer, but another deep sigh. Then the apparition took some papers out of the ghost of its pocket, and began to read them to itself. At last, when the bishop had continued to ring, and nobody to come, the spectre rose and departed as sedately as it had arrived. When the servants did, at length, appear, the bishop cried, 'Well, what have you seen?' 'Seen, my lord!' 'Ay, seen! or who—what is

the woman that has been here?' 'Woman, my lord!' (I believe one of the fellows smiled.) In short, when my lord had related his vision his domestics did humbly apprehend that his lordship had been dreaming, and so did his whole family the next morning; for in this, our day, even a bishop's household does not believe in ghosts; and yet it is most certain that the good man had been in no dream, and told nothing but what he had seen; for, as the story circulated, and diverted the ungodly at the prelate's expense, it came at last to the ears of a keeper of a madhouse in the diocese, who came and deposed that a female lunatic, under his care, had escaped from his custody, and finding the gate of the palace open, had marched up to my lord's chamber. The deponent further said that his prisoner was always reading a bundle of papers. I have known stories of ghosts, solemnly authenticated, less credible; and I hope you will believe this, attested by a father of our own Church."

HIBERNATION OF ANIMALS AND THE SLEEP OF PLANTS.

"Talk not to me of bees and such-like hums,
The smell of sweet herbs at the morning prime—
Only lie long enough, and bed becomes
A bed of *time*."

T. Hood.

There are certain animals who not only sleep at night, but who are so constructed that during the winter, when the ordinary food supplies are cut off

from them, they can become for a time unconscious until the returning warmth of genial spring restores them to the wonted activity. They do not appear to have any distinguishing peculiarity of structural organisation, or to form a distinct class of animals, but seem to lend themselves to their surroundings, when the deprivation of food and warmth necessitates their passing a certain portion of the year without these necessaries.

Hibernation has generally been reckoned to be a kind of sleep; but although it may bear some analogy to it, it is really quite a different thing; nor must it be confounded with the last sleep which ends in the death of those who perish from cold. It is rather a beautiful provision against suffering, and for the preservation of certain animals from extinction.

All the functions of the animal are affected, some in a greater, others in a less degree, that of breathing being the earliest to succumb—in fact, if we are to believe Flourens and other authors, in some cases it almost entirely ceases. Circulation, digestion, secretion, and absorption in like manner come nearly to a standstill; the visible excretions are arrested, and the temperature reduced nearly to the surrounding medium. All animals before hibernating become remarkably fat, which seems to be a provision for their warmth during their torpor.

M. Mangili, an Italian naturalist, made some curious experiments with a dormouse and other hibernating animals. He kept the dormouse in a cupboard in his study. On the 24th of December, the thermometer

being about 40°, the dormouse curled itself up amongst a heap of papers, and went to sleep. On the 27th, the thermometer being several degrees lower, M. Mangili ascertained that the animal breathed, and suspended its respiration at regular intervals—that is, that after four minutes of perfect repose, in which it appeared as if dead, it breathed about twenty-four times in the space of a minute and a half, and then again its breathing was completely suspended, and again renewed. As the weather became milder the intervals were reduced to three minutes; but when the thermometer fell nearly to the freezing point the intervals were then six minutes. Within ten days from its beginning to sleep (the weather then being very cold) the dormouse woke up and ate a little. It then went to sleep again, and occasionally wakened through the winter. But as the season advanced the intervals of perfect repose when no breathing could be perceived were much longer, sometimes more than twenty minutes.

The little marmot, which used to be a familiar sight in our public streets in the hands of little dusky Italian boys, makes no provision for winter, but curls itself and goes to sleep till warm weather returns.

The bat is another example of hibernation. During the cold weather these curious animal-birds cluster together, generally suspending themselves head downwards by their hind claws.

The polar and brown bear, the hedgehog, the badger, the squirrel, the frog, the land tortoise, and almost all the individuals of the lizard, insect, and serpent tribes also hibernate.

A period of rest seems as necessary for the vegetable as for the animal kingdom. Many plants and succulents grow more during the night and darkness than under the glare and heat of the day. Nearly all plants of a delicate constitution have a different appearance by night from that presented by day.

Their leaves, buds, and flowers rise, droop, fold over and protect themselves in various ways, and some, such as the pimpernel, close at even the appearance of cloudiness in the sky. The evening primrose closes up regularly with departing daylight, and reopens again with its return. So do the trefoil, the oxalis, and other herbs with ternate leaves. "A singular instance of this state of plants, and which first attracted the notice of the great Linnæus, occurred in a species of water-lily, *lotus ornithopodioides*. The plant being rare was much prized by its owner, and two blossoms appearing on it, the gardener was particularly cautioned to take care and prevent any accident occurring to it until more notice could be taken of it. Business prevented its being thought of until evening; but when it was produced no blossom was visible. The next day the flowers were again seen, but in the evening were not to be found; the third day the same thing occurred; but after a very minute search each blossom was found hidden under thin leaves, as if covered with a penthouse, protected from the air, and quite concealed from the eye. 'From this,' says Linnæus, 'we may see that the structure of leaves is not fortuitous, but destined by an omniscient Creator to answer some particular end.'"—(Dr. Pinkerton.)

There is, indeed, a great resemblance between the night sleep of the animal and vegetable kingdoms, and probably the absence of light and need of rest are the primary causes of both. In the one kind there is also the repose of the moving and muscular systems, whilst in the other there is only the repose of the productive and secretory glands or vessels. The two states, therefore, are not identical, but bear sufficient analogy to make them interesting as materials for study and observation.

And while upon the subject of the lower animals I may draw attention to a curious bat found in hot climates, which is given to sucking the blood of any one whom it can find sleeping, and its mode of procedure is as follows:—Having found the object of attack, it commences carefully to fan it with its wings, which are large and well adapted for the purpose. This lulls the p[illegible] into a sounder sleep, and the bat then commences [illegible] horrible meal, without the victim being conscious of what is going on.

AUTHORITIES.

> "There was an ancient sage philosopher
> That had read Alexander Ross over."
>
> BUTLER.

THE following extracts from various authors are given as bearing out the opinions contained in this work:—

Sir John Sinclair.—"Lord Bacon soon discovered

that the process of assimilation was principally accomplished during sleep."

Dr. Philip remarks, with regard to our not being aware at the time of the absurdity of our dreams:—"Why should we be surprised at our moving through the air when we are not aware that we have not always done so? In general there is neither time nor subject for reflection."

Dr. Carpenter, in his *Mental Physiology*, says:—"The state of sleep is essentially dependent upon a reduction of the enormous blood supply, which is an essential to the functional activity of the brain, and this reduction is effected by the control which the vaso-motor system of nerves has over the arteries."

Dr. Macnish.—"Another is a case related by Blumenbach of a person being trepanned, and whose brain was observed to sink when he was asleep, and swell out when he was awake—a proof of the diminished circulation in that organ during sleep."

Dr. Hodgkin.—"The portion of time to be devoted to rest, and the part of the day in which it should be taken, are points to be especially considered in the regulation of rest. It will be improper to lay down one rule for all persons with respect to the amount of time which ought to be spent in taking rest."

And Hinton.—"From experiments upon the lower animals by Donders, Kussmaul, Jenner, Durham, and Hammond, and from their arguments, it is now the most generally received opinion that sleep is caused by a withdrawal of the blood from the brain."

Dr. Carpenter also says sleep is a complete suspension

of sensorial activity, and Tissot proved by a multitude of facts that intense thought destroys an aptitude for sleep.

"Mr. Wasse, Rector of Aynho, Northamptonshire, measured a number of people, and found that each of them was taller (by nearly an inch) in the morning than they had been the previous evening." (Macnish.)

Dr. Forbes Winslow.—"The brain cannot be in a healthy condition whilst a state of sleeplessness exists, particularly if the brain is predisposed to undue exertion. Sound, continuous, unbroken, regular, and uninterrupted sleep is essential to the preservation of the mental and bodily health."

Dr. Robertson says:—"Sleep may be fairly and emphatically said to be the great means of compensating for an undue waste of tissue, and of maintaining or restoring the balance of the vital forces."

"Baron Liebig says:—"There must occur in every individual, unless the phenomena of motion are to cease entirely, a condition in which all voluntary motions are completely checked. This condition is called sleep."

Dr. Hammond.—*Sleep and its Derangements.*—"Indigestion is quite a common cause of wakefulness, even when no marked disagreeable sensations are experienced in the digestive organs. A full meal, especially if it be of highly seasoned or otherwise improper food, will often keep the offending individual awake the greater part of the night."

Dendy, in *The Philosophy of Mystery*, p. 283, states that there was in 1821, at Montpellier, a woman who had lost part of her skull, and the brain and its mem-

branes laid bare. When she was in deep sleep the brain remained motionless beneath the crest of the cranial bones; when she was dreaming it became somewhat elevated; and when she was awake it was protruded through the fissure in the skull.

Dr. Durham, in his *Physiology of Sleep*, says that he placed a dog under the influence of chloroform, and removed with a trephine a portion of bone as large as a shilling from the parietal region. The dura mater was also cut away. During the continuance of the anæsthetic influence the large veins of the pia mater were distended, and the smaller vessels were full of dark-coloured blood. The longer the administration of the chloroform was continued the greater was the congestion. As the effects of this agent passed off the animal sank into a natural sleep, and then the condition of the brain was very materially changed. Its surface became pale, and sank down below the level of the bone; the veins ceased to be distended, and many which had been full of dark blood could no longer be distinguished. When the animal was roused the surface of the brain became suffused with a red blush, and it ascended into the opening through the skull. As the mental excitement increased the brain became more and more turgid with blood, and innumerable vessels sprang into sight. The circulation was also increased in rapidity. After being fed the animal fell asleep, and the brain again became contracted and pale. In all these observations the contrast between the two conditions was exceedingly well marked.

Dr. Hammond details an experiment of his own. A

medium-sized dog was trephined over the left parietal bone, close to the sagittal suture, having previously been placed under the full anæsthetic influence of ether. The opening made by the trephine was enlarged with a pair of strong bone forceps, so as to expose the dura mater to the extent of a full square inch. This membrane was then cut away, and the brain brought into view. It was sunk below the inner surface of the skull, and but few vessels were visible. Those which could be perceived, however, evidently conveyed dark blood, and the whole exposed surface of the brain was of a purple colour. As the anæsthetic influence passed off the circulation of the blood in the brain became more active. The purple hue faded away, and numerous small vessels filled with red blood became visible; at the same time the volume of the brain increased, and when the animal became fully roused the organ protruded through the opening in the skull to such an extent that, at the most prominent part, its surface was more than a quarter of an inch above the external surface of the cranium. While the dog continued awake the condition and position of the brain remained unchanged. After the lapse of half-an-hour sleep ensued. While this state was coming on I watched the brain very attentively. Its volume slowly decreased; many of its smaller blood-vessels became invisible, and finally it was so much contracted that its surface, pale and apparently deprived of blood, was far below the level of the cranial wall.

Dr. Bostock says:—"Many facts lead us to conclude it to be a general law of the nervous system that it is

incapable of acting for any length of time without being exhausted and requiring an interval of repose." Dr. George Moore says, further, that "there is reason to believe that growth or addition to the body never takes place whilst the senses are engaged, in consequence of the demand made by the mind in the maintaining their action." And Dr. Carmichael (*Transactions of Irish College*, VII., p. 48), after remarking that sleep depends upon something more than mere rest after fatigue, conceives "that it is essentially connected with the process of assimilation, and particularly with the deposition of new matter in the brain." (Bostock.) Dr. Durham says:—"The condition of the cerebral circulation during sleep is from physical causes that which is most favourable to the nutrition of the brain tissue."

—:o:—

CONCLUSION.

"Sweet be thy dreams, good night, good night."

In conclusion, sleep is not an isolated action; it is rather the result of several causes, and dependent upon many little processes. These, like the growth of plants, may be greatly modified by careful treatment. Success will be the issue of a course of good routine laid down and firmly adhered to, and will, when properly managed, become second nature. If you set in action the necessary forces, and present the necessary concomitants, sleep will be absolutely certain.

As an instance of the contrary, many persons get into bed without any real intention of going to sleep at all, and will lie awake from this cause alone. Such persons had better remain out of bed until they feel the need of sleep, and then make up their minds and go to sleep.

Always take plenty of outdoor exercise, for nothing conduces so much to promote healthy sleep as a moderate degree of fatigue. When a person is tired he can fall asleep on a deal board, whilst, when he is not so, a silken couch can hardly woo the coy nymph. A walk to and from the office, swimming, cricket, boating, skating, athletic exercises, or, for the fair sex, walking, croquet, rinking, riding, &c., according to the tastes and opportunities at command, are each admirable, and will amply repay the small exertion required for their performance. Be careful to keep the body in good health, and pay great attention to diet, avoiding indigestible food and highly-seasoned dishes, hearty suppers late at night, or too long fasting. Avoid as much as possible overworking the brain late at night and keeping it in a high state of tension by the use of strong tea, &c. If obliged to keep the mental powers in active exertion, do not continue to do so for too long a time; let the mind be rested from time to time by taking a walk, having forty winks, or other similar means. In this way the same number of hours may be devoted to labour without any of the unpleasant consequences indicated above.

Carefully observe and avoid every cause which produces wakefulness. A little attention will soon indicate

those causes, and, if the avoidance of them *does* call for a little self-denial, how good it is to deny oneself a few moments of favourite indulgence, when by so doing one can insure a sound night's rest! Some, who cannot manage without, adopt the practice of reading in bed. This is a very dangerous practice where candles are employed, though there is not so much objection where it can be made perfectly safe, but it is better avoided altogether.

Take care that the body, when preparing for sleep, is neither too hot in summer nor too cold in winter. A cold bath in the one case, and "a warm" at the fire, or a hot tile, in the other, will soon set matters straight. If you have attended to all the above matters perseveringly, and are still restless, try a change into the country or town, entirely alter your present mode of living, and let your brain run "out of harness" altogether. If this does not do you had better consult a physician, for something must be in this case radically wrong.

And how beautiful is sleep! Who shall describe its soft and peaceful nature? Who shall picture the calm repose, the sweet dreams, the renewed strength, and the joyful awakening? *That* is beyond mortal power! No human description can adequately portray it, typical as it is of that state which shall have a glorious ending, ushered in by the trump of angels and archangels, and by the appearance of the great and glorious Creator of Sleep.

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